Socijalna psihijatrija

UDC 616.89
SPSIDE 47 (3) 239-430 (2019)
ISSN 2459-6140

VOL. 47 – 2019
BROJ/NUMBER 3
ZAGREB, rujan/September 2019.

Simpozij / *Symposium*

Dugovječnost – civilizacijsko postignuće i izazov današnjice
/ Longevity – an Achievement of Our Civilization and a Contemporary Challenge

Gost-urednik / *Guest Editor*

Ninoslav Mimica

SADRŽAJ / *CONTENTS*

UVODNIK / *EDITORIAL*

N. Mimica
241 **Dugovječnost – civilizacijsko postignuće i izazov današnjice**
/ Longevity – an Achievement of Our Civilization and a Contemporary Challenge

PROSLOV / *PROLOGUE*

P. Brečić
244 **Riječ Ravnateljice Klinike za psihijatriju Vrapče**
/ Foreword of the Director of University Psychiatric Hospital Vrapče

PREGLEDNI RADOVI / *REVIEWS*

N. Mimica
247 **Primjeri prijateljskih inicijativa usmjerenih prema osobama s demencijom u Hrvatskoj**
/ Examples of Dementia Friendly Initiatives for Persons with Dementia in Croatia

G. Stoppe
261 **Depresija u starosti**
/ Depression in Old Age

A. Kurz
269 **Multiprofesionalni menadžment demencije**
/ Multiprofessional Management of Dementia

S. G. Sclan
275 **Ponašajni i psihološki simptomi demencije (BPSD)**
/ Behavioural and Psychological Symptoms of Dementia (BPSD)

A. Mihaljević-Peleš, M. Šagud
283 **Anksiozni poremećaji u starijih osoba**
/ Anxiety Disorders in Elderly

M. Mladinov
292 **Poremećaji spavanja u Alzheimerovoj bolesti – od kliničke slike do neurobioloških nalaza**
/ Sleep Disorders in Alzheimer's Disease: from Clinical Presentation to Neurobiological Findings

S. Uzun, O. Kozumplik, D. Kalinić, I. Požgain, N. Mimica
303 **Neurokognitivni poremećaji – kako možemo smanjiti rizik**
/ Neurocognitive Disorders – How Can We Reduce the Risk

O. Kozumplik, S. Uzun, D. Kalinić, I. Požgain, N. Mimica
318 **Javljanje sumanutosti u bolesnika s demencijom – pregled literature**
/ Ocurrence of Delusions in Patients with Dementia – Literature Review

STRUČNI RADOVI / *PROFESSIONAL PAPERS*

A. Križaj Grden, N. Mimica
325 **Pristup liječenju Alzheimerove bolesti**
/ Treatment Approach to Alzheimer's Disease

M. Šagud, B. Vuksan Ćusa, A. Mihaljević-Peleš
335 **Antidepresivi kod starije populacije**
/ Antidepressants in Elderly Population

M. Sisek-Šprem, C. Pahlina, M. Herceg, N. Mimica, L. Petrović, B. Radovanić
344 **Logoterapija kao psihoterapijska tehnika na psihogerijatrijskom palijativnom odjelu**
/ Logotherapy as a Psychotherapeutic Technique in Psychogeriatric Palliative Care Ward

N. Klepac
351 **Neurološke promjene u dugovječnosti**
/Neurological Changes in Longevity

S. Uzun, O. Kozumplik, I. Požgain, D. Kalinić, N. Mimica
359 **Liječenje osoba s neurokognitivnim poremećajem – kako poboljšati uvjete liječenja**
/ Treatment of People with Neurocognitive Disorder – How to Improve Treatment Conditions

G. Arbanas
373 **Muče li starije ljude njihovi seksualni problemi?**
/ Do Older People Suffer When They have Sexual Problems?

M. Sisek-Šprem, N. Žaja, D. Kalinić, M. Štengl-Martinjak, Z. Petrović, K. Brzak, N. Mimica
380 **Uzroci i dinamika tjelesnih komplikacija/neželjenih događaja tijekom hospitalizacije bolesnika s demencijom**
/ The Frequency and Causes of Physical Complications / Adverse Events During Hospitalization of Patients with Dementia

M. Lalovac, T. Filipec Kanižaj, S. Mejić Krstulović, N. Sobočan, D. Kalinić
387 **Starija životna dob u hrvatskoj kliničkoj praksi nije diskriminirajući čimbenik za transplantaciju jetre**
/ Older Age in Croatian Clinical Practice is Not Discriminative Factor for Liver Transplantation

S. Repovečki, M. Džinić
394 **Palijativni pristup medicinske sestre kod osoba s demencijom**
/ Nurses' Palliative Approach to People with Dementia

J. Sušac, I. Todorić Laidlaw, M. Herceg, A. Jambrošić Sakoman, K. Puljić, N. Mimica
405 **Opterećenje njegovatelja osoba oboljelih od Alzheimerove bolesti**
/ Difficulties of Caregivers of Individuals Suffering from Alzheimer's Disease

SAŽETCI POZVANIH PREDAVANJA / *ABSTRACTS OF INVITED LECTURES*

G. Šimić, D. Bažadona, I. Fabek, M. Babić Leko, M. Bobić Rasonja, D. Kalinić, J. Raguz, E. Bilić, N. Mimica, F. Borovečki, P. R. Hof
412 **Neinvazivni test skrivenog cilja za probir osoba s mogućim početnim spoznajnim urušavanjem**
/ A Non-invasive Hidden-Goal Test for Screening of Persons with Possible Cognitive impairment

S. Tomek-Roksandić
414 **Gerontologija – sadašnjost i budućnost zaštite zdravlja starijih osoba**
/ Gerontology – The Present Time and Future Health Protection of the Elderly

SAŽETCI POSTERA / *ABSTRACTS OF POSTERS*

P. Makarić, D. Vidović, I. Ćelić, T. Jendričko, P. Brečić
417 **Suicidalnost u starijih osoba**
/ Suicide in Older Adults

Z. Kovačić Petrović, T. Peraica, D. Kozarić-Kovačić
419 **Analiza starijih žrtava obiteljskog nasilja u Savjetovalištu za žrtve nasilja**
/ The Analysis of Family Violence Vistims in Guidance Center for Violence Victims

D. Mulc, T. Sabo, D. Kalinić, N. Mimica
421 **Primjena transkranijske magnetne stimulacije kod starije populacije**
/ Use of Transcranial Magnetic Stimulation in the Elderly Population

M. Fremec, N. Kipčić
423 **Izazovi u sestrinskoj praksi tijekom rada s osobama s demencijom**
/ Challenges in Nursing Practice While Working with People with Dementia

425 **UPUTE AUTORIMA / *INSTRUCTIONS TO AUTHORS***

Dugovječnost – civilizacijsko postignuće i izazov današnjice

/ Longevity – an Achievement of Our Civilization and a Contemporary Challenge

TO LINK TO THIS ARTICLE: https://doi.org/10.24869/spsih.2019.241

Ovaj tematski broj «Socijalne psihijatrije» tiskan je povodom 60. obljetnice osnutka Psihogerijatrijskog odjela, a u sklopu 140. obljetnice osnutka i kontinuiranog rada Bolnice Vrapče, današnje Klinike za psihijatriju Vrapče, koja je u svojoj dugogodišnjoj povijesti višekratno mijenjala ime (1), no nikada nije odustajala od prvobitno zadane misije – pomaganja osobama s duševnim smetnjama. Kako je to i kod samog osnutka zamišljeno, Bolnica je građena da bude «lječilište i učilište», a isto je vremenom i postala. Sagledavajući danas što je sve i kada u Bolnici Vrapče osnovano i uvedeno, zasigurno se može reći da su svi suvremeni psihijatrijski trendovi ovdje ubrzo ugledali svjetlo dana, te bili prakticirani – od prvog «elektrošoka» do prve tablete antipsihotika (klorpromazin / Largactil) (2), isto tako od radno-okupacione terapije do art-terapije i analitičkih psihoterapijskih metoda odnosno rehabilitacije psihijatrijskih bolesnika (3).

Davne 1959. godine u ondašnjoj Psihijatrijskoj bolnici Vrapče otvoren je prvi Odjel za gerontopsihijatriju. Tu službu za gerontopsihijatriju osnovao je prim. dr. Velimir Domac, kao prvi odjel takve vrste u bivšoj Jugoslaviji, ali i na ovim prostorima jugoistočne Europe.

Nedugo zatim, 1967. godine, i u susjednoj Psihijatrijskoj bolnici Jankomir (današnja Psihijatrijska bolnica Sveti Ivan) osniva se takav odjel. Prema podatcima iz 1984. godine Odjel gerontopsihijatrije u Vrapču raspolagao je sa 145 kreveta (99 ženskih i 46 muških), a odjel u PB Jankomir s osamdesetak kreveta za bolesnike oba spola.

This issue of "Social Psychiatry" was published on the occasion of the 60th anniversary of the foundation of the Psychogeriatric ward and the 140th anniversary of the foundation and continued work of the Vrapče Hospital, today's University Psychiatric Hospital Vrapče, which has changed its name several times over its long history (1) but never abandoned its initial mission – providing help to people with mental disorders. The hospital was conceived as "a sanatorium and an educational institution", which it became over time. Surveying everything that has been introduced in the Vrapče Hospital, it is obvious that all contemporary psychiatric trends have been practiced there – from the first electroshock to the first antipsychotic tablet (chlorpromazine/Largactil) (2), as well as occupational therapy, art therapy, and analytic psychotherapeutic methods and rehabilitation for psychiatric patients (3).

In the distant year of 1959, the first gerontopsychiatric ward was opened in what was then called Psychiatric Hospital Vrapče. The gerontopsychiatric war was established by Dr Velimir Domac and was the first such ward not only in ex-Yugoslavia but in this part of Eastern Europe. Not long after, in 1967, the neighbouring Psychiatric Hospital Jankomir (today's St. John Psychiatric Hospital) opened one such ward of its own. According to data from 1984, the Gerontopsychiatric ward in Vrapče had 145 beds (99 female and 46 male), while the ward in the Psychiatric Hospital Jankomir had approximately 80 beds for patients of both genders.

Prelistavajući u bolničkoj Knjižnici knjigu pod naslovom «Sveobuhvatna zaštita starijih osoba», a koja sadrži materijale sa Simpozija održanog povodom proslave dvadesetpete godišnjice Odjela za gerontopsihijatriju, a koju je izdala Psihijatrijska bolnica Vrapče – Zagreb (4), može se konstatirati da je već tada u ovom okruženju shvaćena bit suvremenog društva, a to je upravo taj posvuda evidentni iskorak glede signifikantnog produljenja ljudskog života, tj. novo-ostvarene dugovječnosti, kao jedinstvenog civilizacijskog postignuća suvremenog društva.

Danas, kada Svjetska zdravstvena organizacija proglašava demenciju, koja je tipična bolest III. životne dobi, javno-zdravstvenim prioritetom, i kada se od svake zemlje traži da izradi svoj Nacionalni plan / strategiju borbe protiv demencije, postaje potpuno jasno da i bolnička skrb za starije treba biti specijalizirana, tj. skrojena prema njihovoj mjeri, uvažavajući specifične poteškoće i potičući preostale mogućnosti (5).

Svoju gratifikaciju «Služba za gerontopsihijatriju» doživljava 2018. godine kada je od strane Ministarstva zdravstva Republike Hrvatske u sklopu Klinike za psihijatriju Vrapče, a na osnovi stručnosti i brojnih prethodnih aktivnosti, u «Vrapču» imenovan Referentni centar za Alzheimerovu bolest i psihijatriju starije životne dobi (6). Stručnjaci različitih profila koji rade u Referentnom centru svakodnevno multidisciplinskim pristupom sveobuhvatno skrbe za osobe oboljele od demencije i za njihove neformalne njegovatelje, koji su najčešće članovi obitelji.

Povodom ovog Simpozija pod naslovom «Dugovječnost – civilizacijsko postignuće i izazov današnjice», a koji se održava na Dan bolnice 15. studenog 2019. godine, brojni eminentni stručnjaci iz područja neuropsihijatrije starije životne dobi, kao pozvani predavači, zamoljeni su također da svoje teme i pismeno obrade, tj. prirede članak za ovaj tematski broj, te apostrofiraju neke od medicinskih izazova koje pred sve nas stavlja dugovječnost. Nadalje, i autori odabranih postera zamoljeni su da napišu cje-

By reading the pages of a book from the hospital library entitled "Comprehensive protection of the elderly", which contains materials from a symposium held on the 25th anniversary of the Gerontopsychiatric ward and which was published by the Psychiatric Hospital Vrapče – Zagreb (4), it is noticeable that even in those days the essence of contemporary societies was understood, which is the evident progress in the area of significant extension of life expectancy or newly achieved longevity as a unique achievement of the contemporary society.

Now that the World Health Organization has declared dementia, a disease typical for the elderly, a public health problem, requesting that every country make its own national plan or strategy for a fight against dementia, it becomes entirely clear that hospital care for the elderly needs to be specialized, i.e. conceived according to the patient's needs, simultaneously taking into consideration specific difficulties and encouraging other treatment options (5).

The Gerontopsychiatric ward was gratified in 2018 when the Croatian Ministry of Health established the Referral Centre for Alzheimer's Disease and Old Age Psychiatry within the University Psychiatric Hospital Vrapče on the basis of expertise and numerous previous activities (6). Experts of various backgrounds working at the Referral Centre use a multidisciplinary approach on a daily basis to comprehensively care for people with dementia and their informal caregivers, who are usually family members.

On the occasion of this symposium, entitled "Longevity – an achievement of our civilization and a contemporary challenge" and held on Hospital Day, November 15, 2019, numerous prominent experts from the field of neuropsychiatry of old age who were invited to hold lectures were also asked to prepare their topics in the form of articles for this thematic issue and thereby address certain medical challenges presented by longevity. The authors of selected posters were also asked to provide summa-

lovite tekstove, odnosno sažetke svojih izlaganja. Na taj smo način ovim tematskim brojem omogućili i onima koji nisu bili u mogućnosti nazočiti Simpoziju da pročitaju o čemu je sve bilo riječi, a budućim generacijama da kritički sagledaju ovaj trenutak kako bi mogli biti bolji u liječenju, te učinkovitiji i empatičniji u skrbi starijih osoba.

Prof. prim. dr. sc. Ninoslav Mimica, dr. med., IFAPA

Predstojnik Klinike za psihijatriju Vrapče

Voditelj Referentnog centra za Alzheimerovu bolest i psihijatriju starije životne dobi

Pročelnik Zavoda za biologijsku psihijatriju i psihogerijatriju

Gost-urednik časopisa Socijalna psihijatrija

ries of their presentations. This thematic issue therefore enables those who were prevented from attending the symposium to read about the topics that were discussed, while future generations can critically assess this moment in order to improve their treatment skills, efficacy, and empathy when providing care to the elderly.

Prof. prim. Ninoslav Mimica, MD, PhD, IFAPA

Head of University Psychiatric Hospital Vrapče

Head of the Referral Centre for Alzheimer's Disease and Old Age Psychiatry

Head of Institute of Biological Psychiatry and Psychogeriatrics

Guest editor of the journal Social Psychiatry

LITERATURA/*REFERENCES*

1. Jukić V. Nazivi Psihijatrijske bolnice Vrapče kroz njezinu povijest. Soc Psihijat 2011; 39(2): 126-7.
2. Folnegović-Šmalc V, Henigsberg N, Kocijan-Hercigonja D, Makarić G, Mimica N, Uzun S. Pedeset godina psihofarmakoterapije. LijecVjesn 2002; 124(11-12): 378-9.
3. Brečić P, Ostojić D, Stijačić D, Jukić V. Od radne terapije i rekreacije do psihosocijalnih metoda liječenja i rehabilitacije psihijatrijskih bolesnika u Bolnici „Vrapče". Soc Psihijat 2013; 41(2): 174-83.
4. Mrkoci B. (ur.). Sveobuhvatna zaštita starijih osoba. Zagreb: Psihijatrijska bolnica Vrapče – Zagreb, Služba za gerontopsihijatriju, Svezak X, 1986.
5. Mimica N, Bogdanović N, Tomasović Mrčela N, Tomek-Roksandić S, Kušan Jukić M, Klepac N i sur. Alzheimerova bolest – gerijatrijski gerontološko-javnozdravstveni prioritet. U: Tomek-Roksandić S, Mimica N, Kušan Jukić M (ur.),Alzheimerova bolest i druge demencije – rano otkrivanje i zaštita zdravlja. Zagreb: Medicinska naklada, 2017, str. 3-13.
6. Mimica N, Uzun S, Sisek-Šprem M. Referentni centar Ministarstva zdravstva za Alzheimerovu bolest i psihijatriju starije životne dobi. Neurol Croat 2018; 67(Suppl. 3): 71.

Riječ Ravnateljice Klinike za psihijatriju Vrapče

/ Foreword of the Director of University Psychiatric Hospital Vrapče

TO LINK TO THIS ARTICLE: https://doi.org/10.24869/spsih.2019.244

Klinika za psihijatriju Vrapče, ove, 2019. godine slavi svoju 140. obljetnicu postojanja i rada. Povodom Dana Bolnice, 15. studenog 2019. godine u Klinici će se, uz svečani program, održati i Simpozij pod nazivom''Dugovječnost – civilizacijsko postignuće i izazov današnjice'' koji će na simboličan način naglasiti osnovnu funkciju ove bolnice tijekom njezine povijesti – brigu i skrb za najranjiviji dio populacije.

Klinika za psihijatriju Vrapče je naša najstarija, najveća i najznačajnija psihijatrijska ustanova koja je namjenski građena za oboljele od duševnih poremećaja. Činjenica da je takvu bolnicu naš narod dobio samo 18 godina nakon što ju je dobio Beč i 11 godina nakon što je sagrađena u Budimpešti, čini ovu bolnicu trajnim podsjetnikom naše pripadnosti srednjeeuropskom civilizacijskom ozračju.

Inicijativa za izgradnju ''Zavoda za umobolne Stenjevec'' pokrenuta je sredinom 19. stoljeća; tridesetak godina prije njegove izgradnje. Konačna inicijativa dolazi u Hrvatski sabor koji na svojoj sjednici od 28. studenog 1873. godine donosi „Osnove zakona o ustrojenju javne ludnice za obseg kraljevinah Hrvatske i Slavonije i krajine vojne hrvatsko-slavonske". Zakon šalje na izvršenje banu Ivanu Mažuraniću, koji poduzima sve da se „javna ludnica" i sagradi. U čast bana Ivana Mažuranića, kao najzaslužnijeg za izgradnju Bolnice u ulaznoj veži postavljena je ploča s natpisom "Za banovanja Ivana Mažuranića bude ovaj hram čovječnosti po zaključku Hrvatskog sabora podignut godine 1878/9."

In 2019 University Psychiatric Hospital Vrapče celebrates its 140th anniversary. On the occasion of Hospital Day, November 15, 2019, the Hospital will hold a symposium entitled "Longevity – an achievement of our civilization and a contemporary challenge", which will symbolically emphasize the basic purpose of this hospital throughout its history – care for the most vulnerable part of the population.

University Psychiatric Hospital Vrapče is our oldest, largest, and most significant psychiatric institution, purposely built for those suffering from mental disorders. Our nation received such an institution merely eighteen years after Vienna and eleven years after Budapest, which makes this hospital a permanent reminder of our place in the middle-European civilizational atmosphere.

The initiative to construct "The Mental Health Institute Stenjevec" was launched in mid-nineteenth century, some thirty years before it was built. The final initiative was brought to the Croatian Parliament, which in a session held on November 28, 1873, adopted the "Fundamentals of the law on the establishment of a public madhouse for the royal regions of Croatia and Slavonia and the Croatian-Slavonian military border". The law was sent to Ban Ivan Mažuranić, who undertook all necessary measures for the building of the "public madhouse". In honour of Ban Ivan Mažuranić, as the person most responsible for the construction of the hospital, a plaque was placed in the entry hall with the following inscription: "In 1879/9 this temple of humanity

Tijekom svoje povijesti Klinika za psihijatriju Vrapče izrasla je u stožernu psihijatrijsku ustanovu u Hrvatskoj. Uz osnovnu djelatnost – liječenje duševnih bolesnika – godišnje oko 8.500 hospitalizacija, 25.000 dolazaka u Dnevnu bolnicu i oko 60.000 ambulantnih pregleda - u Bolnici se odvija intenzivan nastavni i znanstveni rad. Bolnica ima značajnu izdavačku i kulturnu djelatnost, a njezini stručnjaci značajno artikuliraju sva važnija pitanja koja se odnose na oboljele od duševnih poremećaja.

Bolnica je nastavna baza Medicinskog fakulteta, Edukacijsko-rehabilitacijskog fakulteta, Pravnog fakulteta Sveučilišta u Zagrebu, te Hrvatskih studija. Više je izbornih kolegija koje stručnjaci Bolnice vode studentima nekih drugih fakulteta zagrebačkog Sveučilišta. U Bolnici se educiraju postdiplomanti i specijalizanti iz psihijatrije.

U Klinici za psihijatriju Vrapče posebno se vodi briga o ljudskim pravima duševnih bolesnika. U ovoj Bolnici su najprije artikulirani svi propisi koji se odnose na duševne bolesnike, poglavito njihova prava. Psihijatri iz "Vrapča" bili su jedni od kreatora Zakona o zaštiti osoba s duševnim smetnjama koji je Hrvatski sabor donio 1997. godine. Taj zakon je najprije implementiran upravo u "Vrapču", u "Vrapču" je praćena njegova primjena i iz "Vrapča" su krenule inicijative o izmjenama onih dijelova Zakona koje je trebalo poboljšati.

Njegujući jednu od važnih odrednica svojega rada u Bolnici se godinama, na sustavni način od 1959. godine, brine o populaciji starijih bolesnika. Razumijevajući odjeke civilizacijskog napretka u produljenju životnog vijeka, a time i svih poremećaja kojima je vremešnost bremenita, Bolnica razvija infrastrukturne i stručne kapacitete kako bi na najbolji način skrbila o starijoj populaciji, čuvajući njeno dostojanstvo. U tom smislu očekujemo dovršetak započete izgradnje novog Zavoda za psihogerijatriju. Ovaj bi Simpozij, s vrlo izazovnim naslovom

was erected under Ban Ivan Mažuranić according to the suggestion of the Croatian Parliament".

During its history, the University Psychiatric Hospital Vrapče grew into the most prominent psychiatric institution in Croatia. Along with its primary function – treatment of mental disorders – every year approximately 8.500 patients are hospitalized, 25.000 patients are received in outpatient care, and around 60.000 clinical examinations are performed – the hospital is also the site of intense educational and scientific work. The hospital is the site of significant publishing and cultural activities, and its experts are well-versed in all important issues related to patients with mental disorders.

The hospital is the educational centre for the School of Medicine, Faculty of Education and Rehabilitation Sciences, Faculty of Law, and the Centre for Croatian Studies. The hospital's experts teach several courses to students of certain other faculties in the University of Zagreb. Post-graduates and residents are also educated at the hospital.

At the University Psychiatric Hospital Vrapče, special attention is paid to the human rights of patients with mental disorders. All the regulations related to patients with mental disorders, especially their rights, were first articulated at the hospital. The psychiatrists from the Vrapče hospital participated in the writing of the Law on the Protection of People with Mental Disorders, adopted by the Croatian Parliament in 1997. The law was first implemented in the Vrapče hospital, its application there was monitored, and initiatives for amendments to the law which required improvement were launched from the Vrapče hospital.

Since 1959, by fostering one of the important principles of its work, the hospital has systematically cared for the population of the elderly. By understanding the consequences of extended life expectancy, including all the disorders that burden longevity, the hospital develops its infrastructural and expert capacities in order to

i bogatim sadržajem, trebao biti i ostati trajni podsjetnik, ne samo na potrebnu svekoliku i kontinuiranu brigu o vremešnoj populaciji, već i na odjeke civilizacijskog napretka kojemu trajno težimo.

Doc. dr. sc. Petrana Brečić
Ravnateljica Klinike za psihijatriju Vrapče
U Zagrebu, 21. listopada 2019.

provide the best possible care to the older population, at the same time protecting their dignity. We are therefore looking forward to the conclusion of the construction of the new Institute for Psychogeriatrics. This symposium, with its interesting title and rich contents, should function as a permanent reminder of not only the need for a comprehensive and continued care for the elderly population but also the consequences of civilizational progress to which we continually strive.

Ass. Prof. Petrana Brečić, PhD
Director of University Psychiatric Hospital Vrapče
Zagreb, October 21, 2019

Primjeri prijateljskih inicijativa usmjerenih prema osobama s demencijom u Hrvatskoj

/ Examples of Dementia Friendly Initiatives for Persons with Dementia in Croatia

Ninoslav Mimica

Sveučilište u Zagrebu, Medicinski fakultet, Klinika za psihijatriju Vrapče, Referentni centar Ministarstva zdravstva Republike Hrvatske za Alzheimerovu bolest i psihijatriju starije životne dobi, Zagreb, Hrvatska

/ University of Zagreb, Medical Faculty, University Psychiatric Hospital Vrapče, Referral Centre of the Ministry of Health of the Republic of Croatia, Zagreb, Croatia

Alzheimerova bolest (AB) je kronična, progresivna, degenerativna bolest središnjeg živčanog sustava koja postupno interferira sa svim segmentima bolesnikova funkcioniranja. Naime, obiteljsko, socijalno i profesionalno djelovanje tijekom godina biva signifikantno narušeno. No, unatoč svemu, danas se s AB i posljedičnom demencijom može dugo godina živjeti kvalitetno i dobro, uz uvjet da je društvo prijateljsko prema osobama s demencijom, njihovim skrbnicima i obiteljima. Takvo društvo izgrađuje se Nacionalnom strategijom borbe protiv demencije, a brojnim prilagodbama i uz puno (malih) pomoći osobama s demencijom, sagledavajući ljude s demencijom kao osobe s kognitivnim umanjenjima, potičući njihove preostale mogućnosti, uz uvažavanje njihovih individualnih nemogućnosti.

U Republici Hrvatskoj, iako još uvijek nije službeno usvojena Nacionalna strategija / Akcijski plan borbe protiv demencije, postoje brojne prijateljske inicijative usmjerene prema osobama s demencijom i to poglavito radom nevladinih udruga poput Hrvatske udruge za Alzheimerovu bolest, stručnih društava kao što je Hrvatsko društvo za Alzheimerovu bolest i psihijatriju starije životne dobi, zatim radom nadležnih referentnih centara Ministarstva zdravstva, poduprto od Hrvatske Alzheimer alijanse koja okuplja brojne relevantne dionike i na taj način pomaže osobama s demencijom i njihovim bližnjima, a sve u nadi da ćemo uskoro i u Hrvatskoj usvojiti Nacionalnu strategiju, te se tako priključiti brojnim europskim zemljama koje to već odavno imaju.

/ Alzheimer's disease (AD) is a chronic, progressive, degenerative disease of the central nervous system which gradually interferes with all segments of the patient's functioning. Their family, social, and professional participation is significantly impaired over a period of years. Despite all of this, today it is possible to live a good, long life even with AD and consequent dementia, with the precondition that the society remains friendly towards people with dementia, their caregivers, and their families. Such a society is created through a national strategy for a fight against dementia, along with numerous adjustments and ample aid for people with dementia, simultaneously treating them as people with cognitive deficiencies, encouraging their remaining abilities, and respecting their individual disabilities.

Although a national strategy or an action plan for a fight against dementia has yet to be adopted by Croatia, there are numerous friendly initiatives for people with dementia, primarily non-profit organisation such as the Croatian Society for Alzheimer's Disease, societies such as the Croatian Society for Alzheimer's Disease and Old Age Psychiatry, and referral centres of the Ministry of Health supported by the Croatian Alzheimer Alliance, which gathers numerous relevant participants and therefore aids people with dementia and their families. All of this is done in the hope that Croatia will soon adopt a national strategy and thereby join numerous European countries who have done so long ago.

ADRESA ZA DOPISIVANJE / *CORRESPONDENCE*:
Prof. prim. dr. sc. Ninoslav Mimica, dr. med., IFAPA
Klinika za psihijatriju Vrapče
Bolnička cesta 32
HR-10090 Zagreb, Hrvatska
E-pošta: ninoslav.mimica@bolnica-vrapce.hr

KLJUČNE RIJEČI / *KEY WORDS*:
Alzheimerova bolest / Alzheimer's Disease
Demencija / Dementia
Hrvatska / Croatia
Liječenje / Treatment
Skrb / Care

TO LINK TO THIS ARTICLE: https://doi.org/10.24869/spsih.2019.247

DUGOVJEČNOST

Ljudi danas (pa i na ovim našim prostorima) u prosjeku žive gotovo tri puta dulje nego prije. Ova promjena se dogodila relativno nedavno (u zadnjih stotinjak godina) i možemo ju povezati sa suvremenim civilizacijskim tekovinama, ljudskim intervencijama u prirodu, kako onim u medicini, tako još i više, onim drugima. Ugodniji, komotniji, kvalitetniji način života, promjena surovog, tj. neprijateljskog okruženja, pogodovao je ljudskoj dugovječnosti koja je postala naš standard, tj. jedno od, ako ne i najveće, postignuće civiliziranog svijeta. Očekivana životna dob nikada nije bila dulja i još uvijek raste. Tajna dugovječnosti intrigira mnoge, a *ikigai* se nudi kao jedan od mogućih odgovora (1). No, pri tome često puta zaboravljamo da ta dramatična promjena u dužini prosječnog ljudskog vijeka donosi i brojne druge, kolateralne promjene (2). U društvu se javlja sve veći udio starije populacije, one iznad 65 godina, tj. one koja (po sili zakona) odlazi u mirovinu i nije više radno aktivna. Svaka populacija, pa tako i populacija starije životne dobi, ima svoje osobitosti, između ostalog i u svojim životnim potrebama vezanim uz morbiditet. Postoje bolesti koje su vezane uz stariju dob, kako one tjelesne tako i one druge. Učestalost demencija, poglavito Alzheimerove bolesti (AB), postaje sve više manifestna, kako je osoba vremešnija, jer je upravo visoka životna dob najveći rizik za nastanak AB (3).

LONGEVITY

Today, people live on average three times longer than before (even here in Croatia). This change occurred relatively recently (in the past one hundred years) and can be associated with contemporary advancements, human interventions in nature, both in medicine and in other disciplines. A more comfortable, better quality lifestyle and a change of a cruel, hostile environment helped improve human longevity, which has become our standard and one of the greatest, if not the greatest, achievement of the civilized world.

Life expectancy has never been higher, and it continues to grow. The secret of longevity has intrigued many, and *ikigai* seems to be one possible answer (1). However, we tend to forget that this dramatic shift in human life expectancy comes with numerous collateral changes (2). There is continual growth of the elderly population, which encompasses people over 65 years of age or those who (according to law) retire and leave the working force. Each population, including the elderly, has its specifics, including its life requirements related to morbidity. Certain diseases are associated with old age, both physical and psychological ones. The frequency of dementia, particularly Alzheimer's disease (AD), becomes increasingly manifest with age because old age is the most significant risk factor for the onset of AD (3).

DEMENCIJA – JAVNOZDRAVSTVENI PRIORITET

Otkako je 2012. godine Svjetska zdravstvena organizacija (SZO – World Health Organization - WHO) demenciju proglasila svjetskim javno-zdravstvenim prioritetom (4), sve zemlje, pa tako i Hrvatska, pozornije se pripremaju za nadolazeću epidemiju (5) i to tako da osmišljavaju načine kako se s tim najbolje nositi (6). Najnoviji epidemiološki podatci ukazuju da trenutno u svijetu boluje više od 50 milijuna ljudi od Alzheimerove bolesti (AB), te da bi do 2030. godine ta brojka mogla narasti do 82 milijuna, a 2050. godine na čak 152 milijuna. Kako se to slikovito govori, svake 3 sekunde netko u svijetu razvije demenciju. Najnovije procjene pokazuju da trenutno u Hrvatskoj živi oko 100.000 osoba s demencijom, da svaka 3 sata jedna nova osoba oboli od demencije, od čega je oko 60-70 % osoba s AB (3,6).

Mnoge (europske) zemlje su već usvojile nacionalne strategije/ akcijske planove borbe protiv AB i drugih demencija (7). Hrvatski stručnjaci su u sklopu Hrvatske Alzheimer alijanse (8), koja danas već broji ukupno 31 članicu (9), izradili, tj. predložili prioritetne aktivnosti, i već po tome (neformalno i doduše nesustavno) postupaju, nastojeći poboljšati uvjete življenja osoba s demencijom, stvarajući uvjete za ranu detekciju bolesti, uz nastojanje da se osigura svima potrebitima standardna terapija, te kvalitetnija njega i skrb. S obzirom da je demencija svugdje stigmatizirana, potrebno je svakodnevno ulagati napore da se to promijeni, a to je najbolje činiti edukacijom populacije, uz prisutnost u medijima, ali dakako i paralelno osposobljavajući što veći broj stručnjaka koji se izravno i neizravno susreću s osobama s demencijom. Na polju istraživanja demencije, i (mala) Hrvatska može dati svoj doprinos, kako temeljnim (10) i translacijskim istraživanjima demencije (11,12) u sklopu naših instituta (Hrvatski institut za istraživanje mozga, Institut Ruđer Bošković i drugi), tako i putem uključivanja u međunarodne kliničke

DEMENTIA – A PUBLIC HEALTH PRIORITY

Since 2012, when the World Health Organization (WHO) declared dementia a world public health priority (4), all countries, including Croatia, have been preparing for an upcoming epidemic (5) by creating ways to combat it (6). The newest epidemiological data indicates that currently more than 50 million people worldwide suffer from Alzheimer's disease (AD), a number that could reach 82 million by 2030 and 152 million by 2050. To put it differently, every three seconds someone in the world develops dementia. The newest estimates indicate that currently there are approximately 100.000 people with dementia in Croatia and that a person develops dementia every three hours, approximately 60-70% of which are cases of AD (3,6). Numerous (European) countries have already adopted national strategies or action plans for a fight against AD and other forms of dementia (7). The Croatian Alzheimer Alliance (8), which already has a total of 31 members (9), created and proposed priority activities which they already employ (although in an informal and non-systematic way) with the aim of improving living conditions for people with dementia, creating conditions for early disease detection, and ensuring the necessary standard therapy and a higher quality of care. Since dementia is always stigmatized, it is necessary to invest daily efforts into changing this, and the best possible course for the achievement of this goal is education and media presence, with simultaneous training for the highest possible number of experts who directly and indirectly come into contact with people with dementia. In the field of dementia research, even a country as small as Croatia can contribute, both in the form of basic (10) and translational dementia research (11,12) and in the form of joining international clinical projects, mainly clinical studies of potential

projekte, poglavito kliničke studije potencijalnih antidementiva (13,14). Prošlo je više od 15 godina otkako je registriran najnoviji antidementiv (memantin), pa se s velikim nestrpljenjem očekuju novi lijekovi koji će, nadamo se, značajnije mijenjati prirodni tijek demencije. U međuvremenu, a i paralelno s ovim istraživanjima koja idu u smislu liječenja demencije, radi se na strategijama prevencije, tj. smanjenja rizika obolijevanja od demencije. A to je moguće provođenjem mjera zdravog života, koji podrazumijeva balansiranu prehranu, nepušenje, umjerenu fizičku aktivnost, uz mjere predostrožnosti glede izbjegavanja ozbiljnijih traumi glave, te uz poticanje mentalne aktivnosti i socijalne interakcije starijih osoba (15). Oboljelima od demencije, poglavito u onih gdje je bolest već dugotrajno manifestna odnosno uznapredovala, treba pružiti adekvatnu skrb i njegu, uključivo i palijativnu skrb (16), a neformalnim njegovateljima osoba s demencijom potrebno je osigurati pomoć šire društvene zajednice i na taj način preduhitriti njihovo «izgaranje» (*burn-out sindrom*) (17).

HRVATSKA UDRUGA ZA ALZHEIMEROVU BOLEST

Hrvatska udruga za Alzheimerovu bolest (18) osnovana je 1999. godine i od tada kreću prve prijateljske inicijative za osobe s demencijom u Hrvatskoj (19), no cijelo hrvatsko društvo postaje svjesnije te potrebe tek od 2012. godine, kada je Svjetska zdravstvena organizacija proglasila demenciju javnozdravstvenim prioritetom (4). Unazad petnaestak godina započelo se obilježavanjem Svjetskog dana Alzheimerove bolesti (21. rujna) u Zagrebu (20,21), a od 2013. godine cijeli se mjesec rujan organiziraju brojni događaji vezani uz podizanje svjesnosti i u sklopu anti-stigma programa (21,22). Tijekom godina u raznim gradovima uz brojna edukativna predavanja za laike organizirao se Alzheimer Café (23,24), Korak za pamćenje (*Memory Walk*) (25,26), a u 2019. po prvi puta i «Utrka za pamćenje». S

antidementives (13,14). Since more than 15 years have passed from the registration of the newest antidementive drug (memantine), everyone is eagerly awaiting new medications which will, hopefully, significantly change the natural course of dementia. In the meantime, and simultaneously with research aimed at dementia treatment, work is being done on prevention strategies and risk reduction for dementia. This is achieved by implementing measures for a healthy lifestyle, including a balanced diet, avoidance of smoking, moderate physical activity, avoidance of serious head trauma, encouragement of mental activity, and social interactions for the elderly (15). People suffering from dementia, especially those whose disease has been manifest for a long time or has progressed, need to be provided with appropriate care, including palliative care (16), while informal caregivers for people with dementia need to be provided with the help of the wider community and therefore prevent the burn-out syndrome (17).

CROATIAN SOCIETY FOR ALZHEIMER'S DISEASE

The Croatian Society for Alzheimer's Disease (CSAD) (18) was founded in 1999, when the first friendly initiatives for people with dementia were launched in Croatia (19), but the Croatian society only became widely aware of this need in 2012, when the World Health Organization declared dementia a public health priority (4). For the past fifteen years, the World Alzheimer's Day (September 21) has been marked in Zagreb (20,21), and since 2013 various events are organized each September which are related to raising awareness and reducing stigma (21,22). Over the years, numerous educational lectures for laypeople have been organized, as well as *Alzheimer's Café* (23,24), *Memory Walk* (25,26), and *A Race to Remember*,

obzirom da Alzheimerova bolest ima utjecaja na cijelu obitelj, neformalnim njegovateljima i ostalim članovima obitelji nudio se posjet Savjetovalištu, sudjelovanje u skupinama za samopomoć, te brojne informacije putem web-stranice, bloga i društvenih mreža (27). U svrhu postavljanja pravovremene dijagnoze demencije, u javnosti se promovirala ilustrirana verzija deset ranih znakova koji mogu upućivati na demenciju (28). Uvažavajući činjenicu da velika većina ljudi s demencijom živi kod kuće, pokušavalo im se pomoći s ponudom usluga kao što su: dnevni centri, dnevne bolnice, patronažne sestre, gerontodomaćice, obroci na kotačima, itd. Kako standardni farmakološki tretman ima svoja ograničenja, osobama s demencijom nudimo sudjelovanje u međunarodnim multicentričnim kliničkim ispitivanjima s inovativnim lijekovima koji potencijalno mijenjaju prirodni tijek bolesti (29).

Aktivnosti Hrvatske udruge za Alzheimerovu bolest promoviramo ideju zajednica koje žele postati prijateljske prema osobama s demencijom, pa su tako gradonačelnici triju gradova (Zagreb, Umag i Lipik) potpisali Povelju u znak spremnosti da gradovi kojima su oni na čelu žele postati demenciji prijateljske zajednice. Drugim projektom – «Prijatelj demencije Hrvatska» osiguravamo da svatko posebno može postati dio svjetskog pokreta koji trenutno broji preko 14 milijuna osoba odlučnih pomoći osobama s demencijom (30).

Nadalje, na kongresima i konferencijama posvećenima demenciji okupljamo sve profesionalce koji se bave demencijom, te radimo na planiranju bolje budućnosti ljudi s demencijom u Hrvatskoj, ali isto tako i njihovih njegovatelja i obitelji (31).

held for the first time in 2019. Since Alzheimer's disease affects the entire family, informal caregivers and other family members were offered a visit to a counselling centre, participation in self-help groups, and ample information on web sites, blogs, and social networks (27). With the purpose of making a timely diagnosis, an illustrated version of ten early signs that can point to dementia was promoted in the public (28). Since most people with dementia live at home, they were offered helpful services such as day centres, day hospitals, visiting nurses, geronto-housewives, meals on wheels, etc. Due to the limitations of the standard pharmacological treatment, people with dementia are also offered participation in international multi-centre clinical research with innovative medications which may potentially change the natural course of the disease (29).

The activities of the Croatian Society for Alzheimer's Disease promote the concept of communities which wish to be friendly towards people with dementia, which is why mayors of three cities (Zagreb, Umag, and Lipik) have signed a charter expressing those cities' willingness to become dementia-friendly communities. The project titled "Croatia – a friend of dementia" ensures that anyone can become part of a world movement which currently has over 14 million people willing to help people with dementia (30).

Furthermore, at meetings and conferences dedicated to dementia we gather all experts working with dementia and plan a better future for people with dementia in Croatia, as well as their caregivers and families (31).

HRVATSKA ALZHEIMER ALIJANSA

Hrvatska Alzheimer alijansa (HAA) osnovana je 2014. godine (32) s intencijom da osnaži inicijativu Hrvatskog društva za Alzheime-

CROATIAN ALZHEIMER ALLIANCE

The Croatian Alzheimer Alliance (CAA) was founded in 2014 (32) with the intention of strengthening the initiative of the Croatian So-

rovu bolest i psihijatriju starije životne dobi Hrvatskog liječničkog zbora (33) i Hrvatske udruge za Alzheimerovu bolest (34) o potrebi izrade i usvajanja nacionalne strategije borbe protiv Alzheimerove bolesti i drugih demencija (7). HAA djeluje bez formalnih obveza, bez članarine, na dobrovoljnoj osnovi, a pod sloganom «Zajednički do boljitka» (35) danas broji 31 članicu, tj. društvo ili udrugu koja je aktivno podržala ovu inicijativu i dala svoj stručni doprinos. Pristup u HAA je i nadalje otvoren. U proteklom razdoblju HAA je ubrzo stekla i međunarodnu podršku (36), kako od brojnih stručnjaka tako i od krovnih organizacija (npr. *Alzheimer's Disease International* i *Alzheimer Europe*) (37). Iako još uvijek u Republici Hrvatskoj nije usvojena nacionalna strategija borbe protiv AB, i ne znamo kada će biti, na osnovi dosadašnjeg zajedničkog rada HAA, ali i njenih članica samostalno, dogodili su se mnogi značajni pozitivni pomaci na području svjesnosti, prepoznavanja, edukacije, preventive, dijagnostike, liječenja, rehabilitacije, skrbi i drugoga glede osoba s demencijom i njihovih njegovatelja (38). To nas svakako ohrabruje da ustrajemo i daje nam snage za daljnji rad (35).

SUVREMENI MENADŽMENT ALZHEIMEROVE BOLESTI

Suvremeni menadžment AB, između ostalog, obuhvaća edukaciju i podizanje svjesnosti o bolesti, popularizaciju mjera koje mogu dovesti do smanjenja rizika za nastanak AB, te što raniju dijagnostiku, pa (u budućnosti) i onu prije nastanka simptoma demencije. Potom kada se postavi (rana) dijagnoza AB nužno je provoditi standardno farmakološko liječenje jednim ili kombinacijom antidementiva, a uz to se po potrebi daju i drugi psihofarmaci (antidepresivi, anksiolitici, hipnotici, antipsihotici i drugi). Kvalitetna suvremena postdijagnostička skrb svakako obuhvaća i

ciety for Alzheimer's Disease and Old Age Psychiatry of the Croatian Physicians Association (33) and the Croatian Society for Alzheimer's Disease (34) for the creation and adoption of a national strategy for a fight against Alzheimer's Disease and other forms of dementia (7). CAA, which has no formal obligations or membership fees and works on a voluntary basis under the slogan "Together towards well-being" (35), today has 31 members made up of societies or associations which have actively supported this initiative and given their expert contribution. CAA is still accepting new members. The CAA has received international support (36) both from numerous experts and umbrella organizations (e.g. Alzheimer's Disease International and Alzheimer Europe) (37). Although Croatia has yet to adopt a national strategy for a fight against AD, the joint work of the CAA and its members' independent work have led to numerous positive improvements in the areas of awareness, recognition, education, prevention, diagnostics, treatment, rehabilitation, and care for people with dementia and their caregivers (38). All of this certainly encourages us and gives us strength for further work (35).

CONTEMPORARY MANAGEMENT OF ALZHEIMER'S DISEASE

Contemporary management of AD encompasses education and disease awareness raising, popularisation of measures which can lead to risk reduction for the onset of AD, and early diagnosis, even (in the future) before the onset of dementia symptoms. Following (early) diagnosis of AD, it is necessary to implement the standard pharmacological treatment using one or a combination of antidementives, with the use of other psychopharmaceuticals (antidepressants, anxiolytics, hypnotics, antipsychotics, etc.) if necessary. A quality contemporary post-diagnostic care also encompasses non-pharmacological treatment meth-

nefarmakološke metode liječenja individualno prilagođene osobi, te brojne tehnološke inovacije (39). U liječenje i skrbi za oboljelog je nužno, ako je ikako moguće, uključiti obitelj oboljelog, koju treba educirati, identificirati neformalnog njegovatelja, te i za njega zdravstveno skrbiti.

Udruge bolesnika su značajan subjekt u sveobuhvatnoj skrbi i destigmatizaciji oboljelih. Grupe samopomoći formirane unutar Udruga od velike su koristi u ohrabrivanju njegovatelja i prevenciji sagorijevanja. U uznapredovalim fazama AB, kada obitelj najčešće nije više u stanju adekvatno skrbiti za bolesnika, nužna je intervencija mobilnih palijativnih timova ili je pak potrebno osigurati smještaj oboljele osobe u specijaliziranu ustanovu. S obzirom na dugovječnost suvremenog društva, potrebno je sve više smještajnih kapaciteta za oboljele od AB, pa se stoga osim izgradnje državnih specijaliziranih ustanova preporuča i djelomična prenamjena postojećih domova za starije osobe, uz edukaciju osoblja. Također i smještaj u tzv. udomiteljske obitelji je prihvatljiva opcija za neke oboljele.

U svezi sa svim navedenim struka u Hrvatskoj tretira AB kao javno-zdravstveni prioritet te stoga potiče usvajanje nacionalne strategije/akcijskog plana za borbu protiv demencije, kako bismo što bolje bili u stanju odgovoriti na izazov dugovječnosti i posljedičnu epidemiju AB (6).

TRENUTNA SKRB O DEMENCIJI

U Hrvatskoj postoje velike razlike u dostupnosti rane dijagnoze, liječenja, i skrbi za osobe s demencijom u različitim regijama zemlje. Trenutni cilj HAA je aktivno raditi na sadržaju, razvoju, i provedbi Nacionalne strategije / Akcijskog plana borbe protiv demencije.

Prioriteti Nacionalne strategije su: (1) pravovremena dijagnoza AB, (2) dostupnost far-

ods adjusted to the individual patient, as well as numerous technological innovations (39). The treatment and care for the patient should, if possible, include the patient's family, who should be educated, and the selection of an informal caregiver, who should also be provided with medical care.

Associations of patients have a significant role in comprehensive care and patient destigmatization. Self-help groups formed within associations are of great help in encouraging caregivers and prevention of burnout. In advanced stages of AD, when the family is in most cases no longer able to provide adequate care to the patient, it is necessary to provide the intervention of mobile palliative teams or place the patient in a specialized institution. Considering the longevity of contemporary societies, there is a need for increased accommodation capacities for patients with AD. Therefore, recommendations include the construction of specialized state institutions and partial conversion of existing retirement homes, along with staff education. Another option acceptable to some patients is placement in so-called foster families.

In Croatia, the expert community treats AD as a public health priority and recommends the adoption of a national strategy/action plan for the fight against dementia in order to provide the best possible response to the challenge posed by longevity and the consequent epidemic of AD (6).

CURRENT CARE FOR DEMENTIA

In Croatia, there is a great disparity in the availability of early diagnosis, treatment, and care for people with dementia in various regions of the country. The current goal of CAA is to actively work on the content, development, and implementation of the national strategy/action plan for the fight against dementia. The priorities of the national strategy are: (1) a timely

makološkog i nefarmakološkog liječenja i (3) uspostavljanje koordiniranog sustava podrške osobama s demencijom i njihovim njegovateljima u zajednici. Već su poduzeti odgovarajući koraci u području pružanja usluga palijativne skrbi za osobe s demencijom te u ustanovama sa specijaliziranom skrbi.

Prvi psihijatrijski odjel osnovan je u Psihijatrijskoj bolnici Vrapče u Zagrebu 1959. godine (40). Tijekom sljedećih desetljeća slični psihogerijatrijski odjeli su otvoreni i u drugim psihijatrijskim bolnicama, a sve s ciljem pružanja specijalističkog liječenja osobama s demencijom u Hrvatskoj. U «Desetljeću mozga» javlja se sve veći interes među neurolozima, psihijatrima i neuroznanstvenicima za etiologiju, ranu dijagnostiku i liječenje AB i drugih tipova demencije.

Svrha HUAB-a je pomoći obiteljima oboljelih od AB edukacijom i savjetovanjem, organiziranjem grupa za samopomoć za njegovatelje i upućivanjem obitelji na zdravstvena i socijalna prava. Stalnom prisutnosti u medijima HUAB je postao poznat obiteljima osoba s demencijom, koje se obraćaju Udruzi za pomoć i savjete, koristeći besplatni SOS-telefon, često čak i prije savjetovanja sa zdravstvenim radnicima (41).

Stoga je misija HUAB-a proširiti znanje o AB, pojasniti zablude, destigmatizirati bolest. Posebna značajka HUAB-a je ta što aktivno radi s nizom zdravstvenih stručnjaka (uključujući neurologe, psihijatre i liječnike opće medicine) koji putem HUAB-a, nude svoju stručnost osobama koje traže pomoć u vezi s AB. Ponosni smo da je HUAB punopravni član međunarodne krovne organizacije ADI od 2006. godine i punopravni član Europske organizacije *Alzheimer Europe* (AE) od 2012. godine (34).

Posebno smo ponosni na kontinuirani volonterski rad HAA u izradi prijedloga Nacionalne strategije borbe protiv demencije u Hrvatskoj. Također, važno je naglasiti da Hrvatska

diagnosis of AD, (2) the availability of pharmacological and non-pharmacological treatment, and (3) the establishment of a coordinated support system for people with dementia and their caregivers in the community. Appropriate steps in the area of providing palliative care for people with dementia and in institutions with specialized care have been undertaken.

The first psychiatric ward was founded in the University Psychiatric Hospital Vrapče in 1959 (40). Over the following decades similar psychogeriatric wards were opened in other psychiatric hospitals with the goal of providing specialist treatment for people with dementia in Croatia. In the "decade of the brain", there is a growing interest among neurologists, psychiatrists, and neuroscientists for aetiology, early diagnostics, and treatment of AD and other forms of dementia.

The purpose of CSAD is to provide help for people with AD through education and counselling, organizing self-help groups for caregivers, and informing families about their medical and social rights. Through their constant presence in the media, the CSAD has become familiar to families of people with dementia, who turn to the CSAD for help and advice by using a free SOS telephone line, often even before receiving counselling from medical workers (41).

The mission of CSAD is to spread knowledge about AD, clarify certain misconceptions, and destigmatize the disease. One special characteristic of CSAD is that it actively works with a range of medical experts (including neurologists, psychiatrists, and general practitioners) who offer their expertise to people seeking help about AD through CSAD. We are proud that CSAD has been a full member of ADI, an international umbrella organization, since 2006 and a full member of the European organization Alzheimer Europe (AE) since 2012 (34).

We are especially proud of CAA's continual volunteer work in the creation of a proposition

napreduje u skrbi o demenciji; prve specijalizirane jedinice za zbrinjavanje osoba s demencijom u domovima za starije otvorene su 2015. godine u Zagrebu, kapaciteta 12 kreveta, a ovaj potez ubrzo je uslijedio u drugim domovima za starije osobe, pritom navodeći da 7 % kreveta u domovima za starije treba biti rezervirano za ljude s demencijom. Uz to, sve je veći broj zdravstvenih radnika koji se educiraju na kongresima o AB (CROCAD je održan do sada devet puta, u zadnje vrijeme održava se dvogodišnje), obrazovne konferencije (npr. EdukAl 2015, 2016, 2017,2018), te razne edukativne radionice i predavanja diljem zemlje (42, 43). Štoviše, u Hrvatskoj je dobro prihvaćen i *Alzheimer Café* koji osobama s demencijom i njihovim njegovateljima donosi socijalne, kulturne, umjetničke i obrazovne sadržaje. Do sada je održano više od 50 *Alzheimer Café*-a u raznim gradovima u zemlji (npr., na inicijativu HAA tiskana je prva knjiga na hrvatskom jeziku koja govori o Alzheimerovoj bolesti iz perspektive njegovatelja, članova obitelji (44), a također i knjiga anegdota vezanih za Alzheimer u svrhu destigmatizacije i ranog prepoznavanja (45). Također, približavanje tematike Alzheimerove bolesti u obliku stripa vrlo je važno za senzibilizaciju javnosti (46).

U posljednje tri godine došlo je do značajnog poboljšanja u organizaciji usluga palijativne skrbi za osobe s demencijom. U psihijatrijske bolnice uključeni su kreveti za palijativnu skrb za osobe s demencijom u sklopu mreže Hrvatskog zavoda za zdravstveno osiguranje (HZZO). Tako sada u psihijatrijskim bolnicama, na psihogerijatrijskim odjelima trenutno postoje 62 ugovorena kreveta za pacijente s palijativnom skrbi u psihijatrijskim bolnicama, a prednost se daje pacijentima koji pate od demencije. Naš je cilj pružiti usluge palijativne skrbi osobama s AB i drugim vrstama demencije koji žive kod kuće ili u domovima za starije (47).

for a national strategy in the fight against dementia in Croatia. It is also important to emphasize that Croatia has been improving in the area of care for dementia; the first specialized units for providing care to people with dementia in retirement homes were opened in 2015 in Zagreb and had 12 beds, which was soon followed by other retirement homes, with the provision that 7% of beds in retirement homes must be reserved for people with dementia. Moreover, there is a growing number of medical workers who receive training at conference meetings on AD (CROCAD has been held nine times, and in recent years has been held twice per year), educational conferences (e.g. EdukAl 2015, 2016, 2017, 2018), and various educational workshops and lectures throughout the country (42,43). Croatians have also responded positively to the *Alzheimer Café*, which offers social, cultural, artistic, and educational content to people with dementia and their caregivers. More than 50 *Alzheimer Cafés* have been held in various Croatian cities, the first book on Alzheimer's disease from the perspective of caregivers who are family members was published on the initiative of CAA (44), as was a book of anecdotes about Alzheimer's disease with the aim of destigmatization and early diagnosis (45). Bringing Alzheimer's disease closer to the public in the form of a comic book is also very important for its sensibilization (46). In the past three years there has been a significant improvement in the organization of palliative care services for people with dementia. Psychiatric hospitals now contain beds for palliative care for people with dementia within the network of the Croatian Institute for Health Insurance (CIHI). On the psychogeriatric wards of psychiatric hospitals there are now 62 beds for patients receiving palliative care in psychiatric hospitals, and patients suffering from dementia have priority. Our goal is to provide palliative care services to people with AD and other forms of dementia who live at home or in retirement homes (47).

ANTIDEMENTIVI

Dugo su se godina lijekovi iz skupine antidementiva u Hrvatskoj kupovali, tj. nisu išli na teret Hrvatskog zavoda za zdravstveno osiguranje (HZZO), i na taj način su bili nedostupni potrebitima. Ponosni smo na našu borbu za osiguravanje dostupnosti lijekova protiv demencije, i uvrštenje ovih lijekova na Listu, no ova bitka još nije gotova. Donepezil, rivastigmin i memantin registrirani su u Hrvatskoj no nalaze se na tzv. B listi HZZO-a (i za njih se plaća participacija). Osobe s demencijom jedini su bolesnici u Hrvatskoj koji nemaju ni jedan lijek na A listi HZZO-a, što je neprihvatljivo i stručno neopravdano. Hrvatski algoritam za farmakološki tretman AB definiran je još 2006. godine, revidiran 2010., a konačno uveden u praksu 2011. godine (48). Studije su pokazale da antidementivi usporavaju tijek napredovanja demencije i odlažu pacijentov gubitak neovisnosti kao i njihovu institucionalizaciju (49). Antidementivi također smanjuju potrebu za dodatnim psihotropnim lijekovima poput antipsihotika i stabilizatora raspoloženja, koji kod starijih osoba mogu izazvati ozbiljne nuspojave. Dakle, racionalna farmakoterapija smanjuje troškove liječenja i skrbi pacijenta, te značajno poboljšava kvalitetu života osoba s demencijom i njihovih obitelji. Stoga je naš cilj uključivanje lijekova protiv demencije (donepezil, galantamin, rivastigmin i memantin) na osnovnu Listu lijekova, jer su ti lijekovi standardno farmakološko liječenje AB u skladu s profesionalnim smjernicama zasnovanim na farmakoekonomskim načelima (50).

PALIJATIVNA MEDICINA

Današnja suvremena, standardna, medicina može se podijeliti na tri velika područja djelovanja, a to su: preventivna, kurativna i palijativna medicina. Donedavno palijativna medicina nije imala mjesto u kurikulumima hrvatskih medicinskih fakulteta a nije bila ni unutar zdrav-

ANTIDEMENTIVES

For many years in Croatia, medications from the group of antidementives had to be purchased since they were not covered by the Croatian Institute for Health Insurance (CIHI), and were therefore unavailable to those who needed them. We are proud of our struggle for ensuring the availability of medications for dementia and their inclusion on the list, but this fight is far from over. Donepezil, rivastigmine, and memantine are registered in Croatia but can be found on the so-called B list of the CIHI (and therefore need to be covered by co-pay). People with dementia are the only patients in Croatia who do not have a single medication on the A list of the CIHI, which is unacceptable and professionally unjustified. The Croatian algorithm for pharmacological treatment of AD was defined in 2006, revised in 2010, and finally entered practice in 2011 (48). Studies have shown that antidementives slow down the progression of dementia and postpone the patient's loss of autonomy, as well as their hospitalization (49). Antidementives also reduce the need for additional psychotropic medication such as antipsychotics and mood stabilizers, which can have serious side effects in the elderly. Rational pharmacotherapy therefore reduces the costs of treatment and patient care and significantly improves the quality of life for people with dementia and their families. Our goal is the inclusion of medications for dementia (donepezil, galantamine, rivastigmine, and memantine) on the basic medication list because those medications represent standard pharmacological treatment for AD in accordance with professional guidelines based on pharmacoeconomic principles (50).

PALLIATIVE MEDICINE

Today's standard contemporary medicine can be divided into three large areas of activity: preventive, curative, and palliative medicine. Until recently, palliative medicine was not included in

stvenog sustava. Trebalo je proći 100 godina da se na studiju medicine u Zagrebu, u sklopu obveznog programa, uvrsti predmet «Palijativna medicina», te da na taj način budući liječnici steknu osnovna znanja iz tog važnog područja. S druge pak strane, nije bilo lako oformiti mrežu palijativnih kreveta unutar i na teret Hrvatskog zdravstvenog osiguranja. Palijativni kreveti danas su poželjni standard i u specijalnim psihijatrijskim ustanovama, pa ih je tako ukupno 62, i to na način da su raspoređeni kako slijedi – Klinika za psihijatriju Vrapče, Zagreb 15; Psihijatrijska bolnica Sv. Ivan, Zagreb 15; Specijalna bolnica za psihijatriju i palijativnu skrb Sv. Rafael, Strmac 15; Neuropsihijatrijska bolnica «Dr. Ivan Barbot», Popovača 8; Psihijatrijska bolnica Ugljan 6; Psihijatrijska bolnica Rab 3. U području neuropsihijatrijskih poremećaja, gdje koristimo simptomatsku ne-etiološku terapiju, upravo je dobra palijativna skrb ono najviše što možemo pružiti ovim ljudima. Palijativna skrb može, i treba, biti inovativna, jer na svekolike načine može pomoći osobama s neurokognitivnim deficitima i psihičkim teškoćama. Skrb za osobe s demencijom provodi se dobrim dijelom u socijalnim ustanovama, domovima za starije i nemoćne osobe te tu dolazi do izražaja upravo nefarmakološki pristup koji podrazumijeva radno-okupacijsku terapiju, art-terapiju, muziko-terapiju, terapiju plesom, reminiscentnu terapiju i sl., pravi su pristup u postdijagnostičkoj podršci, koja je nužna tijekom dugogodišnjeg življenja s bolešću. Napose u uznapredovaloj fazi bolesti, tj. pred sam kraj života, kvalitetna palijativna skrb (što uključuje i mobilne palijativne timove) je od krucijalne važnosti, jer će upravo takva skrb i njega omogućiti dostojanstveniji kraj života (51).

UMJESTO ZAKLJUČKA

U Hrvatskoj se dugo godina tradicionalno skrbilo o demenciji u sklopu obitelji, bez organizirane podrške društva, a demencija mnogih

the curricula of medical schools, nor was it included in the health system. One hundred years had to pass before the Zagreb School of Medicine included the subject called "Palliative medicine" in its mandatory program, therefore providing future physicians with fundamental knowledge in this important field. On the other hand, it was not easy to form a network of palliative beds within and at the expense of the Croatian Institute for Health Insurance. Palliative beds are nowadays a desirable standard in specialized psychiatric institutions, of which there is a total of 62, and are arranged as follows: University Psychiatric Hospital Vrapče, Zagreb 15; Psychiatric Hospital "Sveti Ivan", Zagreb 15; Special Hospital for Psychiatry and Palliative Care "Sveti Rafael", Strmac 15; Neuropsychiatric Hospital "Dr. Ivan Barbot", Popovača 8; Psychiatric Hospital Ugljan 6; Psychiatric Hospital Rab 3. In the field of neuropsychiatric disorders, in which symptomatic non-etiological therapy is used, good palliative care is the best we can offer to such patients. Palliative care can and should be innovative because it can help people with neurocognitive deficits and psychological problems. Care for people with dementia is mostly provided in social institutions and retirement homes for the elderly and the infirm, where a non-pharmacological approach is especially accentuated and includes occupational therapy, art therapy, musical therapy, dance therapy, reminiscence therapy, etc. This type of approach is valuable in post-diagnostic support, which is necessary when living with a disease for many years. In advanced stages of the disease or at the end of life, quality palliative care (including mobile palliative teams) is of special importance because such care ensures a more dignified end of life (51).

INSTEAD OF A CONCLUSION

For many years in Croatia, people with dementia traditionally received care within the family, with no organized community support, while

ljudi nije bila (pravovremeno) dijagnosticirana. Liječenje za osobe s demencijom, poglavito one s kliničkom slikom ozbiljnih ponašajnih i psihijatrijskih simptoma, odvijalo se na psihogerijatrijskim odjelima unutar psihijatrijskih bolnica. HUAB, nevladina organizacija, počam od 1999. godine, pruža informacije, podršku i edukaciju, uz podizanje svjesnosti o Alzheimerovoj bolesti i drugim demencijama. Predani dobrovoljni rad članova HUAB-a, što uključuje i vrhunske profesionalce iz ovog područja, pomogao je potaknuti razvoj drugih vrsta usluga za osobe s demencijom u Hrvatskoj. Također treba istaknuti aktivnosti Hrvatske Alzheimer alijanse (koja okuplja 31 profesionalno društvo odnosno nevladine udruge) u pripremi sadržaja nacrta Nacionalne strategije borbe protiv Alzheimerove bolesti i drugih demencija u Hrvatskoj. Nadalje, za pohvaliti je osnivanje prve Dnevne bolnice za osobe s demencijom, prvog državnog specijaliziranog Doma za osobe s demencijom te uvrštenje palijativnih kreveta unutar bolničkog zdravstvenog sustava koji su postali dostupni ljudima s demencijom u Hrvatskoj. Najnovija inicijativa Grada Zagreba je osnivanje Radne skupine za demenciju kojoj je zadatak prijedlog akcijskog plana borbe protiv demencije na području Grada Zagreba. Sve prethodno navedeno dobra je osnova za uspostavu Nacionalne strategije borbe protiv demencije u sljedećoj godini, a ona će onda osigurati jednaki tretman i skrb za osobe s demencijom u svim dijelovima Hrvatske.

in many cases dementia was not (timely) diagnosed. The treatment of people with dementia, especially those with a clinical picture which included serious behavioural and psychiatric symptoms, took place on psychogeriatric wards of psychiatric hospitals. From 1999, CSAD, a non-profit organization, has offered information, support, and education while raising awareness about Alzheimer's disease and other forms of dementia. Dedicated volunteer work of CSAD members, including that of top experts in this field, helped encourage the development of other types of services for people with dementia in Croatia. We should also point out the activities of the Croatian Alzheimer Alliance (gathering 31 professional societies or non-profit organizations) related to the preparation of an outline for a national strategy in the fight against Alzheimer's disease and other forms of dementia in Croatia. Other worthy activities include the opening of the first day hospital for people with dementia, the first state specialized home for people with dementia, and the inclusion of palliative beds within the hospital health system, which have become available to people with dementia in Croatia. The newest initiative of the city of Zagreb is the founding of a work group for dementia, whose task is the creation of a proposal for an action plan for a fight against dementia for the city of Zagreb. All of this represents a good basis for the creation of a national strategy for a fight against dementia in the following year, which should ensure equal treatment and care for people with dementia in all parts of Croatia.

LITERATURA/*REFERENCES*

1. Garcia H, Miralles F. Ikigai – The Japanese Secret to a Long and Happy Life. London: Hutchinson, 2017.
2. Mimica N, Kušan Jukić M. Alzheimerova bolest i dugovječnost – kako to pomiriti. Lijec Vjesn 2016; 138(Suppl 2): 32-3.
3. Mimica N. Demencija: javnozdravstveni prioritet. U: Klepac N, Borovečki F. (ur). Lewy body demencija, Parkinsonova i Alzheimerova bolest u kliničkoj praksi., Zagreb: Sveučilište u Zagrebu - Medicinski fakultet, 2019, str. 1-4.
4. World Health Organization and Alzheimer's Disease International. Dementia: a public health priority. Geneva: WHO, 2012.
5. Hackman RA, Faustin A, Wisniewski T. Alzheimer disease and its growing epidemic: Risk factors, biomarkers and the urgent need for therapeutics. Neurol Clin 2016; 34(4): 941–53.
6. Mimica N. Suvremeni menadžment Alzheimerove bolesti. Knjiga sažetaka - XVII psihijatrijski dani Bosne i Hercegovine. Liječenje u psihijatriji: aktuelnosti i dileme. Tuzla: Univerzitetski klinički centar Tuzla, str. 60-61.
7. Mimica N, Kušan Jukić, M, Presečki P, Ivičić M, Braš M, Vrbić Lj i sur. Hrvatska strategija borbe protiv Alzheimerove bolesti i drugih demencija – prijedlog nacrta uz nadopune. Medix 2015; 21(117): 111-8.

8. Mimica N, Kušan Jukić M. Hrvatska Alzheimer alijansa. Medix 2015 ; 21(117): 107-9.
9. Mimica N. Strategija borbe protiv demencije. U: Klepac N, Borovečki F (ur). Praktičan pristup bolesniku s demencijom (Vaskularni kognitivni poremećaji, vaskularna demencija i Alzheimerova bolest). Zagreb: Sveučilište u Zagrebu – Medicinski fakultet; 2017, str. 3-7.
10. Boban M, Šarac H, Mimica N, Mladinov M, Süßmair C, Ackl N i sur. CSF tau proteins in differential diagnosis of dementia. Transl Neurosci 2010; 1(1): 43-8.
11. Pivac N, Nikolac M, Nedic G, Mustapic M, Borovecki F, Hajnsek S i sur. Brain derived neurotrophic factor Val66Met polymorphism and psychotic symptoms in Alzheimer's disease. Prog Neuropsychopharmacol Biol Psychiatry 2011; 35(2): 356-62. doi: 10.1016/j.pnpbp.2010.10.020
12. Mustapic M, Popovic Hadzija M, Pavlovic M, Pavkovic P, Presecki P, Mrazovac D i sur. Alzheimer's disease and type 2 diabetes: The association study of polymorphisms in tumor necrosis factor-alpha and apolipoprotein E genes. Metab Brain Dis 2012; 27(4): 507-12.
13. Folnegović-Šmalc V, Kittner B, Makarić G, Mimica N, Rößner M. Pentoxifylline treated MID patients; Results of a European double-blind placebo-controlled multicentre study. Innsbruck: Abstracts of 26th Danube Symposium for Neurological Sciences; 1993, pp. 19.
14. Schneeberger A, Hendrix S, Mandler M, Ellison N, Bürger V, Brunner M i sur. Results from a Phase II Study to Assess the Clinical and Immunological Activity of AFFITOPE® AD02 in Patients with Early Alzheimer's Disease. J Prev Alzheimers Dis 2015; 2(2): 103-14.
15. Presečki P, Šain I, Peharda T, Breški D, Mimica N. Risk assessment and prevention of Alzheimer's disease. Neurol Croat 2008; 57(Suppl 4): 94.
16. Mimica N. Demencija i palijativna skrb. Neurol Croat 2011; 60(3-4): 119-24.
17. Uzun S, Mimica N, Kozumplik O, Kušan Jukić M, Todorić Laidlaw I, Kalinić D i sur. Alzheimerova bolest - utjecaj na život i psihičko zdravlje njegovateljica. Soc psihijat 2019; 47(1): 86-101.
18. Mimica N, Dajčić M, Ivanković V, Pecotić Z, Šimić G, Vidas A. Hrvatska udruga za Alzheimerovu bolest. Lijec Vjesn 2006; 128(Suppl 1): 170-1.
19. Mimica N, Dajčić M, Ivanković V, Pecotić Z, Šimić G, Vidas Kaćanski A i sur. Activities of Alzheimer's Disease Societies Croatia. Neurol Croat 2006; 55(Suppl 4): 100.
20. Mimica N, Dajčić M. 21. 09. 2010. Svjetski dan Alzheimerove bolesti. Zdravlje Info 2010; 1(2): 22-3.
21. Mimica N, Šimić G, Kalinić D, Kerepčić-Ratkaj Lj. Obilježavanje Svjetskog dana Alzheimerove bolesti i Svjetskog mjeseca Alzheimerove bolesti. Neurol Croat 2014; 63(Suppl. 2): 140.
22. Mimica N. Mjesec Alzheimerove bolesti. Medix 2014; 112(XX): 43.
23. Mimica N, Šimić G, Ivičić M, Presečki P. Alzheimer Café – što je to? Neurol Croat 2014; 63(Suppl. 2): 138.
24. Mimica N, Kušan Jukić M, Dajčić T, Huić T. The experience of Alzheimer Café in Croatia. Zbornik sažetaka - Druga edukativna konferencija o Alzheimerovoj bolesti (EdukAl 2016). Zagreb: Hrvatska udruga za Alzheimerovu bolest, str. 52.
25. Mimica N, Šimić G, Klepac N, Mimica N. Memory Walk – korak za pamćenje. Neurol Croat 2014; 63(Suppl. 2): 141.
26. Mimica N, Mimica Ne, Aškić L. «Korak za pamćenje» - hodanjem protiv demencije. Neurol Croat 2016; 65(Suppl. 2): 154.
27. Mimica N, Nagore G, Huić T, Dajčić T. Hrvatska udruga za Alzheimerovu bolest i društvene mreže. Neurol Croat 2014; 63(Suppl. 2): 137.
28. Mimica N, Boban M, Boban Ma, Mladinov M, Radoš M, Stipetic K i sur. Ten early warning signs of Alzheimer's disease – Croatian ilustrated version. Abstracts Book - 23rd Alzheimer's Disease International Conference. London: Alzheimer's Disease International, 2007, pp 56.
29. Uzun S, Kozumplik O, Kalinić D, Pivac N, Mimica Ne. Pitanje pristanka osoba s neurokognitivnim poremećajem u području kliničkih istraživanja. Soc psihijat 2017; 45(3): 202-8.
30. Mimica N. Demenciji prijateljske inicijative u Hrvatskoj. Sažeci/Abstracts - Internacionalni kongres o demenciji (iCoDem/18). Sarajevo: Udruženje AiR, 2018, str. 27.
31. Mimica N, Šimić G, Ivičić M, Uzun S, Kozumplik O. Od Konferencije o demencijama do CROCAD-14. Neurol Croat 2014; 63(Suppl. 2): 139.
32. Mimica N, Šimić G, Kušan Jukić M. Hrvatska Alzheimer alijansa. Neurol Croat 2014; 63(Suppl. 2): 151.
33. Mimica N, Uzun S, Klepac N, Henigsberg N, Sušac J. Hrvatsko društvo za Alzheimerovu bolest i psihijatriju starije životne dobi. Neurol Croat 2018; 67(Suppl. 3): 74-5.
34. Mimica N, Pecotić Z, Šimić G, Dajčić M, Mimica Ne, Trešćec-Ivičić M i sur. Hrvatska udruga za Alzheimerovu bolest – od osnivanja do punopravnog članstva u međunarodnim krovnim asocijacijama. Neurol Croat 2012; 61(Suppl 4): 73-4.
35. Mimica N, Kušan Jukić M, Mimica Ne. Hrvatska Alzheimer alijansa – zajednički do boljitka. Neurol Croat 2018; 67(Suppl. 3): 75-6.
36. Mimica N, Kušan Jukić M. Croatia. U: Burns A, Robert P (eds). Dementia Care: International Perspectives. Oxford: Oxford University Press, 2019, pp 129-37.
37. Mimica N, Šimić G, Trešćec-Ivičić M, Dajčić M, Dajčić T. Alzheimer's Disease Society Croatia - member of Alzheimer's Disease International and Alzheimer Europe. Neurol Croat 2010: 59(Suppl 2): 145.
38. Mimica N, Kušan Jukić M. Hrvatska Alzheimerova alijansa. U: Tomek-Roksandić S, Mimica N, Kušan Jukić M (ur.)Alzheimerova bolest i druge demencije – rano otkrivanje i zaštita zdravlja. Zagreb: Medicinska naklada, 2017, str. 270-5.
39. Mimica N. How can technology help people with(out) dementia. Neurol Croat 2019; 68(Suppl. 1): 13-4.

40. Mrkoci B (ur). Sveobuhvatna zaštita starijih osoba. Zagreb: Psihijatrijska bolnica Vrapče – Zagreb, Služba za gerontopsihijatriju, Svezak X, 1986.
41. Mimica N, Dajcic M, Simic G. Alzheimer Croatia – Helping people with dementia from 1999. Abstract Booklet - 28th International Conference of Alzheimer's Disease International. London: Alzheimer's Disease International; 2013, pp 230.
42. Mimica N. 3. hrvatski kongres o Alzheimerovoj bolesti s međunarodnim sudjelovanjem, Brijuni, 7. – 10. rujna 2006. mef. hr 2006;25(1-2):45-6.
43. Mimica N. Proslov. Zbornik sažetaka - Prva edukativna konferencija o Alzheimerovoj bolesti Hrvatske udruge za Alzheimerovu bolest (EdukAl 2015). Zagreb: HUAB, 2015, str. 15.
44. Kerepčić Ratkaj Lj. Alzheimer u mojem domu – Obiteljske istinite priče. Zagreb: Hrvatski liječnički zbor, Hrvatsko društvo za Alzheimerovu bolest i psihijatriju starije životne dobi; 2016.
45. Mimica N, Kušan Jukić M. Alzheimer – dvanaest anegdota. Zagreb: Medicinska naklada i Klinika za psihijatriju Vrapče, 2018.
46. Mimica N, Vrbić Lj. Odabrane priče iz prakse u skrbi za starije / primjeri ranog otkrivanja Alzheimerove bolesti. U: Tomek-Roksandić S, Mimica N, Kušan Jukić M (ur.). Alzheimerova bolest i druge demencije – rano otkrivanje i zaštita zdravlja., Zagreb: Medicinska naklada, 2017, str. 285-9.
47. Kušan Jukić M, Mimica N. Palijativna skrb o oboljelima od Alzheimerove bolesti i drugih demencija. Medix 2016; 22(119/120): 179-83.
48. Mimica N, Presečki P. Current treatment options for people with Alzheimer's disease in Croatia. Chem Biol Interact 2010; 187: 409-10.
49. Mimica N, Presečki P. How do we treat people with dementia in Croatia. Psychiatr Danub 2010; 22(2): 363-6.
50. Vitezić D, Mimica N. Lijekovi za liječenje Alzheimerove bolesti – farmakoekonomski aspekti i smjernice. Medix 2012; 101/102(18): 216-9.
51. Mimica N. Palijativna skrb za osobe s neurokognitivnim deficitima i psihičkim teškoćama. Knjiga sažetaka - Simpozij «Za Života». Zagreb, 2019, str. 5.

Depresija u starosti
/ Depression in Old Age

Gabriela Stoppe

Voditeljica odjela za psihijatriju starije dobi, Europsko psihijatrijsko udruženje
/ Chair of the Section of Old Age Psychiatry, European Psychiatric Association

Učestalost simptoma depresije povećava se sa starošću te pogađa 10-20 % populacije. Depresija često prati tjelesne bolesti, poremećaje sna, bol i druge psihičke poremećaje. Prognoza komorbidnih stanja pogoršava se s komorbiditetom. Prepoznavanje i liječenje depresije relevantno je u do 90 % slučajeva samoubojstava starijih osoba.

Diferencijalna dijagnoza i terapija su složenije te zahtijevaju više strpljenja, kako liječnika tako i pacijenta. Sve metode liječenja su jednako učinkovite kao i kod mlađih odraslih osoba, ali EKT je uspješnija metoda. Postoji velika stopa podcjenjivanja dijagnoze i nedovoljnog liječenja. To se pogotovo odnosi na provođenje psihoterapije. Potrebno je više intervencija u prevenciji iz perspektive zdravstvene ekonomije. Više stigma predstavlja prepreku: starost, psihološki poremećaji, veći broj pacijenata ženskog spola.

***/** An increasing frequency of depressive symptoms with age is found, according to severity 10-20% of the population are affected. Depression frequently occurs with physical disease, sleep disturbances, pain and other mental disorders. The prognosis of comorbid conditions becomes worse with comorbidity. The recognition and treatment of depression is relevant for up to 90% of suicides in the elderly.*

The differential diagnosis and therapy is more complex and needs more patience on both sides, the therapist and the patient. All treatment methods are as efficacious as in younger adults, with ECT being even superior. There is a high rate of underdiagnoses and undertreatment. This applies strongly for the provision of psychotherapy. More interventions into prevention would be beneficial, also from the perspective of health economy. Multiple stigmas are obstacles: age, mental disorders, mostly female patients.

ADRESA ZA DOPISIVANJE / *CORRESPONDENCE*:
Prof. Gabriela Stoppe, dr. med.
Chair of the Section of the Old Age Psychiatry
European Psychiatric Association
Gerbergasse 16
CH-4001 Basel
E-mail: gabriela.stoppe@unibas.ch

KLJUČNE RIJEČI / *KEY WORDS*:
Depresija / *Depression*
Starost / *Old age*
Komorbidnost / *Comorbidity*
Prevencija samoubojstva / *Suicide prevention*

TO LINK TO THIS ARTICLE: https://doi.org/10.24869/spsih.2019.261

UVOD

Nakon anksioznih poremećaja, depresija je najčešća psihička bolest u svim životnim razdobljima, uključujući stariju dob. Dugo se pretpostavljalo da se depresivni i drugi afektivni poremećaji smanjuju s godinama (1). Također se pretpostavljalo da depresija postaje učestalija zbog broja problema koji se povezuju sa starijom dobi, a smatralo se i da u starijoj dobi nastupaju jači somatski simptomi. Dijagnostičke kriterije trebalo bi zato posebno definirati za depresiju vezanu za stariju dob, a ona bi trebala uključivati „depresiju bez depresije", tj. bez prevladavajućeg depresivnog raspoloženja ili maskirane depresije.

EPIDEMIOLOGIJA I FAKTORI RIZIKA

No, proučimo li znanstvene dokaze, vidljivo je da su u većini studija stope prevalencije teških depresivnih poremećaja iznosile 2,6 % ili manje. U umirovljeničkim domovima, koje se često ne uključuje u epidemiološka istraživanja, učestalost je značajno veća te varira između 5 i 25 %, s prosjekom od 10 %. Nije bilo značajnih razlika u stopi učestalosti između različitih dobnih skupina. Odgovarajuća istraživanja također nisu pronašla uvjerljive dokaze da su fenomenološke razlike između dobnih skupina relevantne. Premda su stope prevalencije i učestalosti teških depresivnih poremećaja niže u starijoj dobi u usporedbi s mlađim dobnim skupinama, više stope simptoma depresije pronađene su u otprilike 8-16 % slučajeva, dok su simptomi subkliničke depresije pronađeni su 10-50 %, a ustanovljeni su i simptomi drugih tipova depresije, npr. distimije. Moguće je zaključiti kako postoji viša stopa simptoma depresije u starijoj dobi, ali niža stopa teških depresivnih poremećaja (2,3).

Jedno objašnjenje za takvo stanje može biti viša stopa tjelesnih komorbiditeta. S jedne

INTRODUCTION

Depression is - after anxiety disorders - the most common mental illness at all stages of life, including old age. For a long time, it was suspected that depressive and other affective disorders would fade out or chronify with age (1). In addition, depression was expected to become more common given the many problems associated with old age. Last but not least, it was considered that a stronger somatic symptom presentation could occur. For this reason, specific diagnostic criteria were discussed specifically for age-related depression, which should include in particular "depression without depression", i.e. without predominant depressive mood or masked depression.

EPIDEMIOLOGY AND RISK FACTORS

However, if one looks at the scientific evidence, it can be seen that in the majority of the studies prevalence rates of the major depressive disorder were of or less than 2.6%. In nursing homes, which are often not included in epidemiological studies, the frequency is significantly higher and varies between 5 and 25% with a median of 10%. There were no significant differences in incidence rates across age groups. The corresponding studies also did not provide sufficient evidence that the phenomenological differences between the age groups are relevant. Although the prevalence and incidence rates for major depressive disorders are lower in old age compared to younger age groups, comparatively higher rates for depressive symptoms were found in about 8-16% and subclinical depression in 10-50% and also for other types of depression, for example dysthymias. In summary, there is a higher rate of depressive symptoms in old age but a lower rate of major depressive disorders (2,3).

One explanation may be the higher rate of physical comorbidity. On the one hand, this of-

strane, to često vodi do isključenja depresivnih osoba iz epidemioloških istraživanja jer starije osobe u upitnicima navode da su njihove tegobe posljedice tjelesnih uzroka. Moguće je da se teške simptome depresije precjenjuje ili podcjenjuje kod ljudi koji se žale na tjelesne tegobe. Ovo naročito vrijedi u kontekstu depresivnih simptoma slabosti (4).

U starijoj dobi česta je komorbidnost depresije sa somatskim bolestima. Postoje čvrsti dokazi da depresija udvostručuje rizik od kardiovaskularnih bolesti i smrti, a taj se rizik povećava s težinom depresije (npr. 5). Depresija također ima negativan utjecaj na tijek bolesti nakon srčanog ili moždanog udara. Više od 75 % ljudi koji boluju od šećerne bolesti pate od povratnog depresivnog poremećaja. Pokazalo se da i u tom slučaju komorbidna depresija otežava tijek dijabetesa, ali intervencije usmjerene na depresiju mogu ublažiti tijek dijabetesa (6). Depresija također udvostručuje rizik od neurodegenerativnih bolesti, pogotovo Alzheimerove i Parkinsonove bolesti (7,8).

Pretpostavka da normalno starenje može dovesti do depresivnog raspoloženja nije točna. Psihološka su istraživanja pokazala da se zaštitni čimbenici povećavaju s godinama. Subjektivna dobrobit najčešće ima tijek u obliku slova U, pri čemu je najniža točka u srednjim godinama, premda se čini da je napor tada najveći. Ne postoje dokazi da stresori mogu uzrokovati više štete u starijoj dobi nego u mlađoj. Isto vrijedi i obrnuto. Pretpostavka da je gubitak partnera lakše podnijeti u starijoj dobi nije točna. U usporedbi s mlađim odraslim osobama, stariji ljudi imaju jednaku količinu pozitivne afektivnosti, ali manje negativne afektivnosti poput depresije, anksioznosti, sramežljivosti ili čak osjećaja krivnje. Dobra iskustva se također lakše pamte (2,9,10).

Depresija ne utječe jednako na sve ljude. Postoje rizične skupine. Kao i u svim dijelovima života, jače su zahvaćeni ljudi s obiteljskim

ten leads to the exclusion of depressive persons from epidemiological studies because the elderly stated in surveys that physical causes have been found for their complaints. It is possible that severe depressive symptoms are overestimated or underestimated in people with physical complaints. This is particularly true in the context of depressive symptoms of frailty (4).

Especially in old age there is often a comorbidity of depression with somatic diseases. There is very good evidence that depression - increasingly with the severity of depression - doubles the risk of cardiovascular disease and mortality (e.g. 5). Depression also has a negative influence on the course of the disease after a heart attack or stroke. More than 75% of people with diabetes mellitus appear to suffer from a recurrent depressive disorder. Here, too, it was shown that comorbid depression worsened the course of diabetes and interventions aimed at depression can improve the course (6). Depression also doubles the risk of neurodegenerative diseases, especially Alzheimer's dementia and Parkinson's disease (7,8).

The assumption that normal aging could lead to depressive mood is not correct. Rather, psychological studies show that protective factors increase with age. The subjective well-being usually shows a U-shaped course with a low point in middle age, when the biographical strain seems to be the most severe. There is no evidence that stressors cause more damage in old age than in younger years. This applies in both directions. The assumption that a loss of a partner is easier to bear in old age, because one has to reckon with it, is not correct. Compared to younger adults, older people have about the same amount of positive affectivity but less negative affectivity such as depression, anxiety, shyness or even feelings of guilt. Good experiences are also remembered more easily (2, 9, 10).

Depression does not affect all people equally. There are risk groups. As in all stages of life, people with a corresponding family burden or

teretom ili prethodnim periodima bolesti. Također postoje određeni životni događaji u starosti, primjerice gubitak partnera ili nove somatske bolesti. To posebno vrijedi ako su takve tegobe popraćene boli i/ili vode do ovisnosti o drugima. Organske bolesti mozga imaju veću ulogu. Nedostatak ili smanjenje društvenog kruga – usamljenost – povećava rizik od depresije. Kronična oštećenja, a posebno problemi s osjetilima poput vida ili sluha te bol ili kronični problemi sa spavanjem povezuju se s povećanim rizikom (11,12).

Posljednjih se godina raspravlja o fenomenu usamljenosti. Neki tvrde da usamljenost ima negativan utjecaj na tjelesno zdravlje i smrtnost jedino ako se nalazi u kontekstu depresije.

Česti komorbidni anksiozni poremećaji pogoršavaju prognozu u starijoj dobi, a isto vrijedi i za mlađe dobne skupine. Procjenjuje se da je prevalencija anksioznih poremećaja između 3,2 i 14,2 %. Postoje određene fobije i opći anksiozni poremećaji. U starijoj dobi važan je poseban oblik straha od pada. Iz longitudinalne perspektive, u 90 % slučajeva već postoji odgovarajuća simptomatologija do 40. godine. To znači da je prva dijagnoza anksioznog poremećaja rijetka u starijoj dobi. U slučaju prve simptomatologije potrebno je, kao i kod većine psiholoških bolesti, razmisliti o početnom razvoju bolesti mozga, napose demenciji (13).

previous illness episodes are more affected. In addition, there are also life events in old age, e.g. the loss of a partner or new somatic diseases. This is particularly true if they are accompanied by pain and/or lead to dependency. Organic brain diseases play a greater role. A missing or reduced social network - loneliness - increases the risk of depression. In addition, chronic impairments, in particular sensory problems of vision or hearing, pain or chronic sleep disorders, are associated with an increased risk (11, 12).

In recent years, there has been a discussion about the phenomenon of loneliness. Some people argue that loneliness would only have harmful effects on physical health and mortality if loneliness is in the context of depression.

The often comorbid anxiety disorders worsen the prognosis in old age, as they do in younger age groups. The prevalence of anxiety disorders is estimated between 3.2 and 14.2%. There are above all specific phobias and also generalised anxiety disorders. In old age, the special form of fear of falling is important. In the longitudinal view, 90% already show a corresponding symptomatology up to the age of 40. This means that a first diagnosis of an anxiety disorder at an advanced age is rare. In the case of a first symptomatology, one should, incidentally for most mental illnesses, think of an incipient brain disease, in particular dementia (13).

DIJAGNOZA

Iz svega navedenog vidljivo je da se depresija dijagnosticira u starijoj dobi kao i u mlađoj i srednjoj. No, potrebno je više opreza kada postoje popratna tjelesna stanja, a moguće ju je liječiti raznim lijekovima koji utječu na raspoloženje. Neke su diferencijalne dijagnoze posebno važne.

Kada je riječ o njezi, potrebno je obratiti pozornost na depresiju, napose kada dođe do

DIAGNOSIS

From the above it can be seen that depression is diagnosed in old age as in younger and middle life stages. However, greater care must be taken when physical conditions are present at the same time and may be treated with a variety of drugs that can affect mood. Some differential diagnoses are particularly important.

In care, it is crucial to think about depression at all, for example when an unclear weight loss

nerazjašnjenog gubitka na težini. Diferencijalna dijagnoza demencije postaje sve lakša jer se demenciju može sve bolje dijagnosticirati koristeći biološke metode. Kada je riječ o kliničkoj slici, postoji preklapanje simptoma. Povlačenje iz društva, psihomotorno usporavanje i smanjenje interesa simptomi su obje bolesti. No, u depresiji su rijetki vizualno-konstruktivni deficiti i semantički poremećaji, koji su pak česti u ranom stadiju Alzheimerove bolesti. Teška oštećenja samopouzdanja, osjećaji krivnje te čak i snažne suicidalne tendencije prije ukazuju na depresiju nego na demenciju.

Važna je diferencijalna dijagnoza tuge. Tugovanje nije bolest, ali proces tugovanja može biti nedovršen zbog depresije ili kompliciranе krivnje. Prilikom postavljanja diferencijalne dijagnoze važno je prepoznati i poticati proces tugovanja. Postoje različiti modeli stadija. Tuga uvijek ima dva lica u smislu da je, s jedne strane, vezana za prorađivanje gubitka, dok s druge strane ima vezu s okretanjem prema budućnosti i zacjeljivanju rana. Tijekom procesa tugovanja ne nailazimo često na osjećaje krivnje, beznadnosti ili oštećenja emocionalnog odjeka. No, diferencijalna dijagnoza ipak može biti teška (14).

Korištenje instrumenata za pregled može biti korisno u otkrivanju depresije. Postoje različite ljestvice, a napose Ljestvica gerijatrijske depresije (GDS; prema engl. *Geriatric Depression Scale*) i Ljestvica bolničke anksioznosti i depresije (HADS; prema engl. *Hospital Anxiety and Depression Scale*).

SPRJEČAVANJE SAMOUBOJSTVA

Sprječavanje samoubojstva od posebne je važnosti u starijoj dobi. Depresija i samoubojstvo jače su povezani u starijoj dobi nego u drugim dobnim skupinama. Istovremeno je stopa samoubojstva u starijoj dobi najve-

occurs. Differential diagnosis of dementia is becoming increasingly easier because dementia can be diagnosed better and better - also using biological methods. Looking at the clinical presentation, there is an overlap of symptoms. In particular, social retreat, psychomotor slowing or declining interest can be found in both diseases. In depression, however, there are rarely visuoconstructive deficits and semantic disorders, which often occur early in Alzheimer's dementia. Severe impairment of self-esteem, feelings of guilt and even strong suicidal tendencies should make one think of depression rather than dementia.

An important differential diagnosis is that of grief. Mourning is not a disease, but the mourning process may not be completed because of depression or complicated grief. In differential diagnosis, it is important to recognise and promote the process character of mourning. Various stage models are discussed. Grief is always Janus-faced in the sense that on the one hand it is about processing the loss, on the other hand it is about orientation towards the future and healing. In the grieving process one typically finds few feelings of guilt, little hopelessness and few impairments of the emotional resonance. Nevertheless, the differential diagnosis can be difficult (14).

The use of screening instruments can be useful in the detection of depression. Various scales are discussed, especially the Geriatric Depression Scale (GDS) and the Hospital Anxiety and Depression Scale (HADS).

SUICIDE PREVENTION

The prevention of suicide is particularly important in old age. Even more than in other age groups, depression and suicide are linked in old age. At the same time, the rate of suicide in old age is highest in almost all countries of the world, especially among men. It is therefore

ća u gotovo svim zemljama svijeta, a napose među muškarcima. Stoga je važno istražiti i liječiti ljude s depresijom zbog potencijalnih sklonosti samoubojstvu. U isto je vrijeme potrebno proučiti imaju li starije osobe koje žele umrijeti depresiju koja zahtijeva liječenje. Naročito je važno započeti razgovor o želji za samoubojstvom, a ne ga izbjegavati. To uključuje i odluku o tome je li još uvijek moguće liječenje u dnevnoj bolnici ili je potrebna hospitalizacija.

LIJEČENJE

Prilikom liječenja, uvijek je važno provjeriti ne samo deficite nego i dostupne izvore. Pregled aktivnosti svakodnevnog života i društvenog okruženja te, ako je potrebno, razgovor s obitelji ili kućni posjet mogu pritom biti od koristi. Općenito govoreći, liječenje depresije u starijoj dobi nema temeljnih razlika u odnosu na liječenje depresije u srednjoj i mlađoj dobi. U odgovarajućim studijama nisu otkrivene značajne razlike prema dobi, napose kada je riječ o farmakoterapiji. No, u kontekstu polifarmacije i somatskih bolesti, farmakoterapiju je potrebno pažljivije nadzirati. Liječenje je potrebno provoditi u okviru cjelovitog plana liječenja. Pritom je od posebne važnosti da liječnici uključeni u liječenje budu suglasni. Stariji ljudi često u svom okruženju imaju nekoliko stručnjaka od kojih traže podršku. To su najčešće obiteljski liječnik, ljekarnik i drugi njegovatelji. Valja naglasiti da se u farmakoterapiji ne smiju koristiti preparati s dugim vremenom poluraspada i antikolinergičkim djelovanjem. U starijoj dobi litij treba koristiti na jednak način, uz pažljiv nadzor bubrežnih vrijednosti i funkcije štitnjače.

Nažalost, psihoterapija, koja je od velike važnosti u liječenju, često nema uspjeha zbog manja terapeuta i/ili manjka mogućnosti za provođenje terapije u pojedinim okruženjima, primjerice staračkim domovima. Ishodi

important to investigate and treat people with depression for potential suicidal tendencies. At the same time, people who wish to die at an advanced age should be examined for the presence of depression requiring treatment. It is particularly important to begin a conversation about the desire to commit suicide and not to avoid it. This also includes the decision as to whether outpatient treatment is still possible or whether inpatient treatment should already be sought.

TREATMENT

In the treatment, it is always relevant to check not only the deficits but also the available resources. The survey of activities in daily life, the social environment and, if necessary, a family discussion or a home visit can be helpful here. Overall, the treatment of depression in old age is not fundamentally different from that in middle and younger stages of life. Particularly in pharmacotherapy, no relevant difference by age was found in the corresponding studies. Nevertheless, in the context of polypharmacy and somatic diseases, pharmacotherapy should be controlled more carefully. Treatment should be embedded in an overall treatment plan. Here it seems important that a consensus of the therapists involved is reached. Older people usually have several professionals in their environment who ask them for support. This is usually the family doctor, often a pharmacist and other caregivers. In pharmacotherapy, it should be noted that preparations with a long half-life and anticholinergic efficacy are not used. Lithium should be used in the same way in old age with careful control of kidney values and thyroid function.

Unfortunately, the use of psychotherapy, which is of great importance in treatment, often fails because there are too few therapists and/or no possibilities are seen in individual settings, for example in nursing homes. The results of the

psihoterapije su komparativno zadovoljavajući (15). Ispostavlja se da je potrebno nešto manje napora kako bi se postigao jednak psihoterapeutski učinak u usporedbi s mlađim ljudima. Stariji su ljudi često više motivirani i spremniji na suradnju u psihoterapiji, što dijelom pojašnjava taj fenomen. U psihoterapiji postoje posebni oblici terapije za starije ljude. To se odnosi, primjerice, na interpersonalnu terapiju, a vrijedi i za terapiju koja uključuje reviziju života, a koja je posebno uspješna u starijoj dobi.

Novija istraživanja pokazuju da je stimulacijska terapija učinkovitija u starijoj dobi nego u mlađoj. To je jasno vidljivo na primjeru elektrošok terapije. Što se tiče ostalih stimulacijskih pristupa, istraživanja su još u tijeku. U svakom slučaju, time se otvara nove mogućnosti, posebno s obzirom na zanemarive nuspojave (16).

Određene skupine zahtijevaju poseban pristup, primjerice depresija s usporednom demencijom ili Parkinsonovom bolešću. U tim je slučajevima potrebno uključiti stručnjake iz gerijatrijske psihijatrije.

Kao i kod drugih dobnih skupina, uporaba algoritama u terapiji pokazala se uspješnom, a to uključuje i nužnu prilagodbu doziranja i odabir drugačijih lijekova. U svojoj se praksi neprestano susrećem s pretjerano opreznim doziranjem ili nastavkom korištenja određenog lijeka unatoč izostanku učinka.

PROGNOZA

Čini se da je prognoza za depresiju u starijoj dobi gora nego u srednjoj. No, tomu nije tako zbog starosti već zbog čimbenika koji su značajni i u drugim životnim razdobljima. Oni uključuju težinu depresije, broj prethodnih depresivnih epizoda, komordbidnost s kroničnim tjelesnim bolestima te vanjski izvor kontrole (17).

psychotherapy are comparatively pleasing (15). It turns out that slightly less effort is needed to achieve the same psychotherapeutic effect compared to younger people. Older people are usually more motivated and cooperative in psychotherapy, which can partly explain this. In psychotherapies, there are special forms for older people. This applies, for example, to interpersonal therapy. This also applies to the life review therapies, which are particularly successful in old age.

Recent studies show that stimulation therapies are more effective in old age than in younger phases of life. This has been nicely demonstrated for electroconvulsive therapy. For other stimulation procedures, corresponding studies are still pending. In any case, this opens up some good prospects for the future, especially if one looks at the very low side effects (16).

Certain special groups need special therapy considerations, for example depression with simultaneous dementia or Parkinson's disease. Here we refer to the inclusion of special expertise in geriatric psychiatry.

As in other age groups, the use of algorithms in therapy has proven successful. This also includes the necessity of dose adjustment and drug change. In my practice I see again and again that either too carefully is dosed or medicines are not stopped despite missing effectiveness.

PROGNOSIS

The prognosis of depression in old age seems to be worse than in middle age. However, this is not due to age but to factors that are also significant in other stages of life. These are in particular the severity of depression, the number of previous episodes, co-morbidity with chronic physical diseases and an external locus of control (17).

Unfortunately, various obstacles are effective in the treatment of depression in old age. This

Nažalost, različite prepreke otežavaju liječenje depresije u starijoj dobi. One ne uključuju samo starost, već i stigmatizaciju koju se često povezuje s psihičkim bolestima. Psihički bolesne žene često nailaze na trostruku stigmu.

PREVENCIJA

I na kraju, nekoliko riječi o prevenciji. Prevencija je doista moguća. Čini se kako tzv. primarna prevencija ima nisku učinkovitost, no prevencija je učinkovitija kod rizičnih skupina. Različitim pristupima vjerojatnost je umanjena i za 50 %! (18)

is not only the age, but also the stigmatization that is generally associated with mental illness. Mentally ill old women often experience a threefold stigma.

PREVENTION

Finally, a few words should be said about prevention. One could show that the prevention of depression is well possible. Here the so-called primary prevention seems rather little effective, but the prevention is all the more effective with risk groups. With different procedures, a reduction of the probability of occurrence of 50% was achieved! (18).

LITERATURA/*REFERENCES*

1. Angst J, Gamma A, Sellaro R, Lavori PW, Zhang H. Recurrence of bipolar disorders and major depression. A life-long perspective. Eur Arch Psychiatry Clin Neurosci 2003;253(5):236-40.
2. Haigh EAP, Bogucki OE, Sigmon ST, Blazer DG. Depression Among Older Adults: A 20-Year update on five common myths and misconceptions. Am J Geriatr Psychiatry 2018;26(1):107-22.
3. Thakur M, Blazer DG. Depression in long-term care. J Am Med Dir Assoc 2008; 9(2):82-7.
4. Hegeman JM, de Waal MW, Comijs HC, Kok RM, van der Mast RC. Depression in later life: a more somatic presentation? J Affect Disord 2015;170:196-202.
5. Ford DE, Mead LA, Chang PP, Cooper-Patrick L, Wang NY, Klag MJ. Depression is a risk factor for coronary artery disease in men: the precursors study. Arch Intern Med 1998;158(13):1422-6.
6. Lustman PJ, Anderson RJ, Freedland KE, de Groot M, Carney RM, Clouse RE.Depression and poor glycemic control: a meta-analytic review of the literature. Diabetes Care 2000;23(7):934-42.
7. Ownby RL, Crocco E, Acevedo A, John V, Loewenstein D. Depression and risk for Alzheimer disease: systematic review, meta-analysis, and metaregression analysis. Arch Gen Psychiatry2006;63(5):530-8.
8. Gustafsson H, Nordström A, Nordström P. Depression and subsequent risk of Parkinson disease: A nationwide cohort study. Neurology 2015;84(24):2422-9.
9. Carstensen LL, Pasupathi M, Mayr U, Nesselroade JR. Emotional experience ineveryday life across the adult life span. J Pers Soc Psychol 2000;79(4):644-55.
10. Charles ST, Carstensen LL. Social and emotional aging. Annu Rev Psychol 2010;61:383-409.
11. Cole MG, Dendukuri N. Risk factors for depression among elderly community subjects: a systematic review and meta-analysis. Am J Psychiatry 2003;160(6):1147-56.
12. Schwarzbach M, Luppa M, Forstmeier S, König HH, Riedel-Heller SG. Social relations and depression in late life-a systematic review. Int J Geriatr Psychiatry 2014;29(1):1-21.
13. Wolitzky-Taylor KB, Castriotta N, Lenze EJ, Stanley MA, Craske MG. Anxiety disorders in older adults: a comprehensive review. Depress Anxiety 2010;27(2):190-211.
14. Stroebe M, Schut H. The dual process of coping with bereavement. Death Studies 1993;23(3):197-224.
15. Cuijpers P, van Straten A, Smit F, Andersson G. Is psychotherapy fort depression equally effective in younger and older adults? A meta-regression analysis. Int Psychogeriatr 2009;21(1):16-24.
16. Bouckaert F, Emsell L, Vansteelandt K, De Winter FL, Van den Stock J, ObbelsJ, et al. Electroconvulsive therapy response in late-life depression unaffected byage-related brain changes. J Affect Disord 2019;251:114-20.
17. Mitchell AJ, Subramaniam H. Prognosis of depression in old age compared tomiddle age: a systematic review of comparative studies. Am J Psychiatry 2005;162(9):1588-601.
18. van't Veer-Tazelaar PJ, van Marwijk HW, van Oppen P, van der Horst HE, Smit F, Cuijpers P, Beekman AT. Prevention of late-life anxiety and depression has sustained effects over 24 months: a pragmatic randomized trial. Am J Geriatr Psychiatry 2011;19(3):230-9.
19. van't Veer-Tazelaar PJ, van Marwijk HW, van Oppen P, van der Horst HE, Smit F, Cuijpers P, Beekman A. Prevention of late-life anxiety and depressino has sustained effects over 24 months: a pragmatic randomized trial. Am J Geriatr Psychiatry 2011;19(3):230-9.

Multiprofesionalni menadžment demencije / *Multiprofessional Management of Dementia*

Alexander Kurz

Odjel za psihijatriju i psihoterapiju, Klinika Rechts der Isar, Tehnički univerzitet München, Medicinski fakultet, München, Njemačka

/ Department of Psychiatry and Psychotherapy, Klinikum Rechts der Isar, Technical University of Munich, School of Medicine, Munich, Germany

Održavanje kvalitete života prioritet je menadžmenta demencije. Kvaliteta života ljudi s demencijom primarno je određena autonomijom, nastavljanjem individualnog životnog stila, postizanjem pojedincu važnih ciljeva, značajnim aktivnostima i sudjelovanjem na ranom stadiju; sigurnošću, uvažavanjem i društvenom povezanošću na srednjem stadiju; te utjehom, dostojanstvom i empatičkim odnosima na kasnom stadiju. Pružanje tih izvora kvalitete života zahtijeva suradnju i koordinaciju više stručnjaka, uključujući liječnike, psihologe, medicinske sestre, socijalne radnike, radne terapeute, govorne i jezične terapeute te fizioterapeute vođene zajedničkim planom njege usmjerenim na pojedinca. Multiprofesionalni model njege osoba s demencijom temeljen na suradnji sadrži značajne prednosti, uključujući nefarmakološke mjere liječenja, uočavanje komorbidnih zdravstvenih stanja, manji teret za njegovatelje te niže stope smještanja u zdravstvene institucije. Stoga je multiprofesionalni menadžment poželjan u većini nacionalnih strategija ili planova za demenciju. Multiprofesionalno obrazovanje preduvjet je za njegu osoba s demencijom temeljenu na suradnji. Osposobljavanje stručnjaka različitih zanimanja unutar okvira timske suradnje vodi k dijeljenju znanja i principa vezanih za njegu osoba s demencijom, boljem razumijevanju uloge drugih stručnjaka te boljoj pripremljenosti za suradnju u svakodnevnoj praksi. Projekt INDEED (Inovacije za demenciju u dunavskoj regiji) koji financira Europska unija je transnacionalna inicijativa za unaprjeđenje njege za osobe s demencijom putem multiprofesionalne obrazovne intervencije koja spaja tradicionalne i moderne metode učenja.

/ Maintaining quality of life is a priority of dementia management. The quality of life of people with dementia is primarily determined by autonomy, continuation of individual lifestyle, attainment of personally important goals, meaningful activities and participation at the early stage; by safety, appreciation and social connectedness at the moderate stage; and by comfort, dignity and emphatic relationships at the severe stage. Providing these sources of quality of life requires the collaboration and coordination of multiple professions, including physicians, psychologists, nurses, social workers, occupational therapists, speech and language therapists, and physical therapists, guided by a joint person-centred care plan. A multiprofessional collaborative care model for dementia has significant benefits including referral for non-pharmacological treatments, detection of comorbid medial conditions, reduced caregiver burden and lower rates of institutionalisation. Therefore, multiprofessional management is a desideratum in most national dementia strategies or plans. A prerequisite for collaborative care in dementia is multiprofessional education. Training professionals of different occupations in a team framework leads to shared knowledge and principles regarding dementia care, enhanced understanding of each other's role, and better preparedness for collaboration in daily practice. The EU-funded project INDEED (Innovation for Dementia in the Danube Region) is a transnational initiative to improve dementia care by a multiprofessional educational intervention combining traditional and modern learning methods.

ADRESA ZA DOPISIVANJE / *CORRESPONDENCE:*
Professor Alexander Kurz, MD, PhD
Department of Psychiatry and Psychotherapy
Klinikum Rechts der Isaar
Technical University of Munich, School of Medicine
Ismaninger Strasse 22
Munich, Germany
E-mail: a.kurz@tum.de

KLJUČNE RIJEČI / *KEY WORDS*:
Demencija / *Dementia*
Kvaliteta života / *Quality of life*
Multiprofesionalno / *Multiprofessional*
Menadžment / *Management*
Obrazovanje / *Education*

TO LINK TO THIS ARTICLE: https://doi.org/10.24869/spsih.2019.269

NEUROBIOLOGIJA, OŠTEĆENJE I INVALIDNOST

U gotovo svim slučajevima demencija je posljedica kroničnih i često progresivnih te trenutno neizlječivih bolesti mozga, među kojima su najčešće Alzheimerova bolest, kardiovaskularna bolest malih krvnih žila, bolest Lewyjevih tjelešacate frontotemporalna lobarna degeneracija. Vrlo je malo potencijalno izlječivih uzoraka, dok je potpuni oporavak od demencije rijetka iznimka (1). Strukturne i biokemijske promjene u mozgu koje se nalaze u podlozi demencije vode do vrlo širokog spektra oštećenja funkcija. One uključuju sve aspekte života, uključujući kognitivne sposobnosti, kontrolu emocija, aktivnosti svakodnevnog življenja, odnose u i izvan obitelji te tjelesnu dobrobit. Prema biopsihosocijalnom modelu bolesti Svjetske zdravstvene organizacije (2), nesposobnost koja proizlazi iz tih oštećenja jednako je značajna za pojedinca kao i oštećenje samih funkcija. Nesposobnost nije u potpunosti određena patologijom, ali na nju utječe društvena i fizička okolina u kojoj pojedinac živi, prepreke s kojima se susreću te podrška koju primaju. Menadžment demencije stoga nije ograničen na bavljenje patologijom ili simptomima, već mora uključivati održavanje funkcija, nadoknadu ograničenja, unaprjeđenje mehanizama olakšavanja, smanjenje prepreka te pružanje podrške. Opći je cilj pružanje optimalne kvalitete života tijekom cijelog toka demencije povećanjem sposobnosti i poticanjem neovisnosti, vraćanjem izgubljenih funkcija tamo gdje za to postoji mogućnost te prilagodbom izgubljenim funkcijama koje je nemoguće vratiti (3).

KVALITETA ŽIVOTA U DEMENCIJI

Čimbenici koji određuju kvalitetu života ljudi s demencijom razlikuju se od osobina značajnih za postavljanje dijagnoze. Kvalitetu života unaprjeđuju odnosi s ljudima, aktivnosti,

NEUROBIOLOGY, IMPAIRMENT, AND DISABILITY

In almost all instances dementia is the result of chronic, often progressive and currently irreversible brain diseases, the most frequent being Alzheimer's disease, small-vessel cerebrovascular disease, the Lewy body diseases and frontotemporal lobar degenerations. There are very few potentially treatable causes, and full recovery from dementia is a rare exception (1). The structural and biochemical brain changes that underlie dementia give rise to a very broad spectrum of impaired functions. It includes all aspects of life, including cognitive abilities, emotional control, activities of daily living, interpersonal relationships within and outside the family, and physical well-being. According to the bio-psycho-social disease model of the World Health Organization (2) the disability that results from these impairments is at least as important for the person as the impairment of functions per se. Of note, disability is not completely determined by the underlying pathology, but it also influenced by the social and physical environment the person lives in, the barriers they encounter, and the support they receive. Therefore, the management of dementia is not limited to addressing the pathology or modifying symptoms but must include maintaining functions, compensating handicaps, increasing facilitators, reducing barriers and providing supportive conditions. The overall aim is providing an optimal quality of life throughout the course of dementia by maximising ability and promoting independence, regaining lost function when there is a potential to do so, and adapting to lost function that cannot be regained (3).

QUALITY OF LIFE IN DEMENTIA

The factors which determine the quality of life of people with dementia are different from the features that are important for establishing the diagnosis. Quality of life is improved by interpersonal relationships, activity, general health,

opće zdravstveno stanje te život u zajednici. Smanjuju ju depresija, problemi u ponašanju te samački život. Pamćenje, starost, spol, obrazovanje te vrsta i trajanje demencija nemaju veze s kvalitetom života (4). Kada je riječ o tijeku demencije, u ranom stadiju kvalitetu života određuju osobna autonomija, nastavak individualnog životnog stila, postizanje pojedincu važnih ciljeva, sudjelovanje u značajnim aktivnostima, održavanje uloga te osjećaj osobe da je potrebna drugima. U srednjem stadiju postaju važni sigurnost, uvažavanje te društvene veze. Na kasnom stadiju kvaliteta života određena je utjehom, dostojanstvom, empatijom te tjelesnom dobrobiti.

ULOGA FARMAKOLOŠKIH I NEFARMAKOLOŠKIH INTERVENCIJA

Postojeći farmakološki oblici liječenja, uključujući inhibitore kolinesteraze i memantin, imaju statistički značajne ali klinički marginalne učinke na kognitivne sposobnosti i težinu demencije. Njihova dobrobit za kvalitetu života ostaje upitna (5). Također su dostupni lijekovi za probleme u ponašanju kao što su agitacija, agresija, apatija i depresija. No, antipsihotici se povezuju sa značajnim nuspojavama i zdravstvenim rizicima (6), dok je učinkovitost antidepresiva kod ljudi s demencijom i depresijom nedavno dovedena u pitanje (7). Iz svega navedenog jasno je da se cilj upravljanja demencijom ne može postići samo lijekovima. Uz njih, potrebne su i određene nefarmakološke intervencije koje mogu unaprijediti kvalitetu života, napose kognitivna stimulacija (8), radna terapija (9) i tjelesna aktivnost (10). Zdravstvene smjernice također predlažu nefarmakološke intervencije kao prvu liniju liječenja problema u ponašanju (11). Nadalje, ključne komponente u upravljanju demencijom su promjena okoline (12), uporaba pomagala (13) te podrška neformalnih njegovatelja (14,15).

and living in the community. It is reduced by depression, behavioural problems and living alone. Memory performance, age, gender, education, type and duration of dementia are unrelated to quality of life (4). When mapped onto the course of dementia, quality of life at the early stage is mediated by personal autonomy, continuation of the individual lifestyle, attainment of personally important goals, participation in meaningful activities, retaining a role, and being needed. At the moderate stage safety, appreciation and social bonds become important. At the severe stage, quality of life is defined by comfort, dignity, empathy and physical well-being.

THE ROLE OF PHARMACOLOGICAL AND NON-PHARMACOLOGICAL INTERVENTIONS

Current pharmacological treatments including cholinesterase inhibitors and memantine have statistically significant but clinically marginal effects on cognitive ability and global severity of dementia. Benefits on quality of life have remained questionable (5). Drugs are also available for the treatment behavioural problems in dementia such as agitation, aggressiveness, apathy or depression. However, antipsychotics are associated with significant side effects and health risks (6), and the efficacy of antidepressants in people with dementia and depression has recently been questioned (7). It is clear from the above that the aim of dementia management cannot be reached with medications alone. The need to be complemented by a number of non-pharmacological interventions which have a potential for improving quality of life, in particular cognitive stimulation (8), occupational therapy (9) and physical exercise (10). Also, non-pharmacological interventions are suggested by medical guidelines as first-line treatments for behavioural problems (11). Furthermore, environmental modification (12), use of assistive technology (13) and support of informal carers (14, 15) are key components of dementia management.

RAZLOZI U KORIST MULTIPROFESIONALNE SURADNJE U MENADŽEMENTU DEMENCIJE

Kako bi se pružio cijeli spektar mogućnosti u liječenju demencije tijekom njezinog trajanja, potrebna je suradnja više profesija (16), dok je obiteljski liječnik najčešće polazna točka u tijeku liječenja (17). Tim za menadžment demencije može uključivati liječnike, psihologe, medicinske sestre, socijalne radnike, radne terapeute, govorne i jezične terapeute te fizioterapeute. Također je moguće uključiti i nacionalne i lokalne volonterske organizacije pacijenata i njegovatelja. Bilo bi najbolje da se takav tim vodi planom njege koji se temelji na potrebama, željama i sredstvima pojedinca te da ga se redovito provjerava i prilagođava progresiji demencije (18). Uloga plana njege je uskladiti i poredati aktivnosti multiprofesionalnog tima, poticati komunikaciju među njegovim članovima te prepoznati prikladne usluge i pogodnosti (19). Osobu s demencijom nužno je uključivati u donošenje odluka dok god za to imaju sposobnost (20).

PREDNOSTI USKLAĐENOG SURADNIČKOG MENADŽMENTA

Postoje dokazi da usklađivanje usluga pruža značajne prednosti ljudima s demencijom i njihovim njegovateljima. Na taj se način unaprjeđuje kvaliteta njege i pridržavanje uputama o liječenju, povećava se zadovoljstvo uslugom, unaprjeđuje zdravstvena kvaliteta života te smanjuje probleme u ponašanju (21,22). Multiprofesionalnim suradničkim modelom njege osoba s demencijom promovira se nefarmakološko liječenje, unaprjeđuje prepoznavanje komorbidnih zdravstvenih stanja te smanjuje stopa smještanja pacijenata u zdravstvene institucije (23).

THE CASE FOR MULTIPROFESSIONAL COLLABORATIVE MANAGEMENT OF DEMENTIA

In order to provide the full spectrum of treatment options along the course of dementia multiple professions need to collaborate and coordinate their efforts (16), with the general physician usually being the entry point of the care pathway (17). The management team may include physicians, psychologists, nurses, social workers, occupational therapists, speech and language therapists, and physical therapists. National or local patients' and carers' voluntary organisations may also be involved. Ideally, the group should be guided by a care plan that is based on the person's individual needs, preferences and resources, is regularly reviewed and adjusted to the progression of dementia (18). The role of the care plan is to coordinate and sequence the activities of the multiprofessional team, facilitate the communication among team members, identify appropriate services and facilities (19). Decision-making must include the person with dementia as long as they have the capacity to contribute (20).

BENEFITS OF COLLABORATIVE AND COORDINATED MANAGEMENT

There is evidence that the coordination of services provides significant benefits for people with dementia and their carers. It improves quality of care and adherence to treatment guidelines, increases the level of service satisfaction, enhances health-related quality of life, and reduces behavioural problems (21, 22). Moreover, multiprofessional collaborative model of dementia care promotes the referral for non-pharmacological treatments, augments the detection of comorbid medical conditions and lower the rates of institutionalisation (23).

MULTIPROFESIONALNO OBRAZOVANJE I OBUČAVANJE

Multiprofesionalno obrazovanje stručnjacima pruža pomagala temeljena na dokazima za prepoznavanje onoga što sami mogu doprinijeti upravljanju demencijom (24). Zajedničko učenje ima utjecaj na pozitivne stavove prema stručnjacima te bolje razumijevanje suradnje u usporedbi s tradicionalnim kliničkim obučavanjem (25). Predlaže se da se programi multiprofesionalnog obučavanja za demenciju usredotoče na četiri kompetencije, koje uključuju ranu dijagnozu, podršku poslije dijagnoze, napredno planiranje njege za osobe s demencijom i njihove njegovatelje te učinkovito umrežavanje.

MULTIPROFESSIONAL EDUCATION AND TRAINING

Multiprofessional education provides professionals with evidence-based tools to identify what they can bring to the management of dementia (24). Shared learning has an impact regarding positive attitudes toward other professionals and increased knowledge of and skills in collaboration compared to conventional clinical training (25). It has been suggested that multiprofessional training programmes for dementia should focus on four competencies, including early diagnosis, post-diagnostic support, advanced care planning for people with dementia and carers, and effective networking.

PROJEKT INDEED

Projekt INDEED (Inovacije za demenciju u dunavskoj regiji) je transnacionalna inicijativa čiji je cilj unaprijediti njegu osoba s demencijom putem multiprofesionalne intervencije koja povezuje tradicionalne i suvremene metode učenja (http://www.interreg-danube.eu/approved-projects/indeed). Projekt podržava INTERREG-Danube Transnational Programme u periodu između 2018 i 2021 te je financiran iz sredstava Europskog fonda za regionalni razvoj (EFRR) i Instrumenta pretpristupne pomoći (IPP). INDEED razvija, procjenjuje i diseminira sveobuhvatni obrazovni program za stručnjake iz područja zdravstvene i socijalne skrbi, ali i poduzetnike. Projektom se unaprjeđuju znanje i vještine vezane za demenciju kod svih ciljanih skupina, uspostavlja veze pružajući alate za umrežavanje te inovira promoviranjem poduzetničkih aktivnosti u području njege osoba s demencijom. Kombinacija tradicionalnih radionica i multimedijalne platforme na internetu bit će dostupna u pet jezika te će se ocjenjivati unutar probne aktivnosti u četiri zemlje.

THE INDEED PROJECT

The INDEED (Innovation for Dementia in the Danube Region) project is a transnational initiative which aims to improve dementia care by a multiprofessional intervention combining traditional and modern learning methods (http://www.interreg-danube.eu/approved-projects/indeed). The project is supported by the INTERREG-Danube Transnational Programme from 2018-2021 with funds from the European Regional Development Fund (ERDF) and the Instrument for Pre-Accession Assistance (IPA). INDEED develops, evaluates and disseminates a comprehensive educational programme for health and social care professionals as well as for entrepreneurs. The project educates by improving knowledge and skills about dementia in all target groups, it connects by providing and practicing networking tools, and it innovates by promoting business activities in the field of dementia care. The combination of traditional workshops and a multi-media online platform will be available in five languages and will be evaluated in pilot actions in four countries.

LITERATURA/*REFERENCES*

1. Clarfield AM. The decreasing prevalence of reversible dementias. Arch Intern Med 2003;163:2219-29.
2. World-Health-Organization. International Classification of Functioning, Disability and Health (ICF). Geneva: World Health Organization; 2001.
3. Poulos CJ, Bayer A, Beaupre L, Clare L, Poulos RG, Wang RH, et al. A comprehensive approach to reablement in dementia. Alzheimer's & Dementia. 2017;3:450-8.
4. Martyr A, Clare L. Executive function and activities of daily living in Alzheimer's disease: a correlational meta-analysis. Dement Geriatr Cogn Disord 2012;33:189-203.
5. Raina P, Santaguida P, Ismaila A, Patterson C, Cowan D, Levine M, et al. Effectiveness of cholinesterase inhibitors and memantine or treating dementia: evidence review for a clinical practice guideline. Ann Intern Med. 2008;148:379-97.
6. Schneider LS, Dagerman K, Insel PS. Efficacy and adverse effects of atypical antipsychotis for dementia: meta-analysis of randomized, placebo-controlled trials. Am J Geriatr Psychiatry. 2006;14:191-210.
7. Dudas R, Malouf R, McCleery J, Dening T. Antidepressants for treating depression in dementia. Cochrane Database Syst Rev. 2018;CD003944.
8. Woods B, Aguirre E, Spector AE, Orrell M. Cognitive stimulation to improve cognitive functioning in people with dementia (Review). Cochrane Database Syst Rev. 2012;CD005562.
9. Ojagbemi A, Owolabi M. Do occupational therapy interventions improve quality of life in persons with dementia? A meta-analysis with implications for future directions. Psychogeriatrics. 2017;17:133-41.
10. Rao AK, Chou A, Bursley B, Smulofsky J, Jezequel K. Systematic review of the effects of exercise on activities of daily living in people with Alzheimer's disease. Am J Occup Ther. 2017;68:50-60.
11. Tampi RR, Tampi DJ, Balachandran S, Srinivasan S. Antipsychotic use in dementia: a systematic review of benefits and risks from meta-analyses. Ther Adv Chronic Dis. 2016;7:229-45.
12. Marquardt G, Viehweger A. Architecture for people with dementia. Planning principles, practices and future challenges. Dresden: Technical University of Dresden; 2014.
13. Lorenz K, Freddolino PP, Comas-Herrera A, Knapp M, Damant J. Technology-based tools and services for people with dementia and carers: mapping technolog on the dementia care pathway. Dementia (London). 2017;February 8.
14. Parker D, Mills S, Abbey J. Effectiveness of interventions that assist caregivers to support people with dementia living in the community: a systematic review. Int J Evid Based Healthc. 2008;6:137-72.
15. Chien LY, Chu H, Guo JL, Liao YM, Chang LI, Chen CH, *et al*. Caregiver support groups in patients with dementia: a meta analysis. Int J Geriatr Psychiatry. 2011;26:1086-98.
16. Callahan CM, Boustani MA, Unverzagt FW, Austrom MG, Damush TM, Perkins AJ, *et al*. Effectiveness of collaborative care for older adults with Alzheimer's disease in primary care. A randomized controlled trial. JAMA. 2006;295:2148-57.
17. Villars H, Oustric S, Andrieu S, Baeyens JP, Bernabei R, Brodaty H, *et al*. The primary care physician and Alzheimer's disease: An international position paper. J Nutr Health Aging. 2010;14:110-20.
18. Schmid R, Eschen A, Rüegger-Frey B, Martin M. Instruments for comprehensive needs assessment in individuals with cognitive complaints, mild cognitive impairment or dementia: a systematic review. Int J Geriatr Psychiatry. 2011;27:329-41.
19. Samsi K, Manthorpe J. Care pathways for dementia: current perspectives. Clin Interv Aging. 2014;9:2055-63.
20. Darby RR, Dickerson BC. Dementia, decision-making and capacity. Harv Rev Psychiatry. 2017;25:270-8.
21. Somme D, Trouve H, Dramé M, Gagnon D, couturier Y, Saint-Jean O. Analysis of case management prgrams for patients with dementia: A systematic review. Alzheimer's & Dementia. 2012;8426-436.
22. Galvin JE, Valois L, Zweig Y. Collaborative transdisciplinary team approach for dementia care. Neurodegener Dis Manag. 2014;4:455-69.
23. Dreier-Wolfgramm A, Miachlowsky B, Guerriero-Austrom M, van-der-Marck MA, Iliffe S, Alder C, et al. Dementia care management in primary care. Current collaborative care models and the case for interprofessional education. Z Gerontol Geriat. 2017;50(Suppl 2):S68-S77.
24. Jackson M, Pelone F, Reeves S, Hassenkamp AM, Emery C, Titmarsh K, *et al*. Interprofessional education in the care of people diagnosed with dementia and their carers: a systematic review. BMJ Open. 2015;6:e010948.
25. Marcussen M, Norgaard B, Arnfred S. The effects of interprofessional education in mental health practice: findings from a systematic review. Academic Psychiatry. 2019;43:200-8.

Ponašajni i psihološki simptomi demencije (BPSD)

/ Behavioural and Psychological Symptoms of Dementia (BPSD)

Steven G. Sclan

PsyKorr, Inc. , Miami, SAD i Berlin, Njemačka

/ PsyKorr, Inc., Miami, USA & Berlin, Germany

Demencija je sindrom koji obuhvaća tri klinička elementa: smanjenu kogniciju, nedostatke u sposobnostima prilagodbe (tj. svakodnevnim životnim aktivnostima [ADL; prema eng. activities of daily living] i/ili instrumentalnim životnim aktivnostima [IADL; prema engl. instrumental activities of daily living]) te poremećaje u ponašanju. Prema novijim istraživanjima, unatoč smanjenoj kogniciji, poremećaji u ponašanju predstavljaju glavni izvor stresa i/ili tereta za njegovatelja pacijenta. Istaknuti odnos između poremećaja u ponašanju i stresa/tereta njegovatelja vrlo je često glavni okidač za hospitalizaciju pacijenta. Svrha je ovog rada ponuditi kratak osvrt na fenomenologiju i određene odabrane kliničke aspekte ponašajnih simptoma demencije.

/ Dementia is a syndrome that entails 3 clinical elements: decline in cognition, deficits in adaptive capacities (i.e., activities of daily living [ADL] and/or instrumental activities of daily living [IADL]) and behavioural disturbances. Intriguingly, despite the cognitive decline recent research indicates that the behavioural disturbances are the major source of stress and/or burden for the caregiver of the patient. Furthermore, the prominent relationship between behavioural disturbance and stress/burden of the caregiver is quite often the major trigger for institutionalization of the patient. The purpose of this presentation is to briefly review the phenomenology and some selected clinical aspects of the behavioural symptoms of dementia.

ADRESA ZA DOPISIVANJE / *CORRESPONDENCE*:

Steven G. Sclan

PsyKorr, Inc.Miami, USA & Berlin, Germany

E-mail: research@psykorr.com

KLJUČNE RIJEČI / *KEY WORDS*:

Alzheimerova bolest / *Alzheimer's Disease*

Demencija / *Dementia*

Ponašanje / *Behaviour*

Simptomi BPSD / *BPSD Symptoms*

TO LINK TO THIS ARTICLE: https://doi.org/10.24869/spsih.2019.275

CILJ

Demencija je sindrom koji uključuje globalni deficit kognicije koji, između ostalog, uključuje funkciju sjećanja. Do smanjenja kognicije ne dolazi zbog delirija. Tri elementa obilježavaju kliničku sliku demencije: smanjenje kognicije, nedostatci u sposobnostima prilagodbe (tj. svakodnevnim životnim aktivnostima [ADL] i/ili instrumentalnim životnim aktivnostima [IADL]) te poremećaji u ponašanju. Pojam „demencija" obuhvaća Alzheimerovu bolest (AB; ~ 60 % slučajeva demencije), cerebrovaskularnu demenciju (CVD: ~ 5 % slučajeva), miješanu demenciju (MD; AB i CVD; ~ 10% slučajeva), demenciju Lewyjevih tjelešaca (DLT; ~ 15 % slučajeva), frontotemporalnu demenciju (FTD; ~ 5 % slučajeva) i drugo (~ 5 % slučajeva) (1-2). Zanimljivo je da unatoč smanjenoj kogniciji i uz to povezanim problemima (npr. poteškoće u sjećanju, poteškoće s integrativnim razmišljanjem i rješavanjem problema, itd.) te smanjenju ADL/IADL novija istraživanja pokazuju da su poremećaji u ponašanju glavni izvor stresa i/ili opterećenja za njegovatelje pacijenata (3-5). U slučaju AB-a, istaknuti odnos između poremećaja u ponašanju i stresa/tereta za njegovatelja (6-11) često je glavni okidač za hospitalizaciju pacijenata (4,7,12,13). Svrha je ovog rada ukratko se osvrnuti na fenomenologiju i određene odabrane kliničke aspekte ponašajnih simptoma demencije. S obzirom da AB i CVD imaju relativno sličan ponašajni profil (14,15) koji se djelomično razlikuje od FTD-a i DLT-a te s obzirom da su AB i CVD odgovorni za 80 % slučajeva demencije, ovaj će osvrt prikazati poremećaje u ponašanju tijekom trajanja AB-a. Na kraju će se rada ukratko izložiti glavne razlike između FTD-a i DLT-a.

KLINIČKI TIJEK ALZHEIMEROVE BOLESTI

Utjecaj ponašajnih simptoma na njegovatelja pacijenta s AB-om najbolje se može shvatiti proučavanjem razvoja simptoma tijekom napre-

AIM

Dementia is a syndrome that entails a global deficit in cognition including, but not limited to, memory function. This decline in cognition is not due to delirium. The clinical picture of dementia is characterized by 3 elements: decline in cognition, deficits in adaptive capacities (i.e., activities of daily living [ADL] and/or instrumental activities of daily living [IADL]) and behavioural disturbances. The term "dementia" is an "umbrella" whose province includes Alzheimer's Disease (AD: ~ 60% of dementias), cerebrovascular dementia (CVD; ~ 5% of cases), mixed dementia (MXD; AD & CVD; ~ 10% cases); Lewy Body dementia (DLB; ~ 15% of dementia); frontotemporal lobe dementia (FTD; ~ 5% of cases); other (~ 5% of cases) (1-2). Intriguingly, despite the cognitive decline and ensuing problems because of this (e.g., memory problems, problems in higher integrative thinking & problem solving, etc.) and, as well, decrements in ADL/IADL, recent research indicates that the behavioural disturbances are the major source of stress and/or burden for the caregiver of the patient (3-5). More specifically, for AD, the prominent relationship between behavioural disturbance and stress/burden of the caregiver (6-11) is quite often the major trigger for institutionalization of the patient (4,7,12,13). The purpose of this presentation is to briefly review the phenomenology and some selected clinical aspects of the behavioural symptoms of dementia. Since AD and CVD have a relatively similar behavioural profile (14,15) that differs slightly from that of both FTD and DLB and, since AD and CVD account for about 80% of cases of dementia, this review will be accomplished via a presentation of behavioural disturbances through the course of AD. A short section at the end of this discussion will present the salient characteristic differences of both FTD and DLB.

dovanja bolesti. Ljestvica globalnog pogoršanja (GDS; prema engl. *Global Deterioration Scale*) (16-21) globalno je mjerilo koje se koristi za procjenu smanjenja kognicije u normalnom starenju i AB-u (tablica 1). Temelji se na općem dojmu stanja pacijenta, a obuhvaća područja kognicije te funkcionalnih (IADL/ADL) i ponašajnih promjena. Ono što je najvažnije jest da GDS pruža mogućnost za detaljno pojašnjenje simptoma koji obilježavaju cijeli opseg oštećenja pamćenja – od normalnog starenja (GDS stadij 1) do najtežeg stadija AB-a (GDS stadij 7) (16-22).

Ključni je element GDS-a činjenica da je ta ljestvica redna (tj. stadiji su „rangirani" na način da stadij s većim brojem predstavlja veće oštećenje u odnosu na stadij koji mu prethodi) i hijerarhijska (tj. stadiji manjeg oštećenja integriraju i upravljaju adaptivnim funkcijama organizma). Kako pacijenti napreduju kroz stadije GDS-a vezane za kliničku dijagnozu AB-a, pokazuju znakove sve uočljivijeg i ozbiljnijeg oštećenja. Kako se pacijent kreće od „stadija manjeg oštećenja" do „stadija većeg oštećenja", dolazi do pogoršanja u težini kliničkih simptoma – uključujući potencijalno pojavljivanje ponašajnih i psiholoških poremećaja.

Često korištene ljestvice za procjenu ponašajnih problema u AB-u uključuju Neuropsihijatrijski inventar (23,24), Ljestvicu za procjenu ponašanja kod demencije konzorcija za uspostavu registra Alzheimerove bolesti (25), Ljestvicu poremećaja u ponašanju kod demencije (26) te druga

CLINICAL PROGRESSION ("COURSE") OF ALZHEIMER'S DISEASE

The impact of the behavioural symptoms upon the caregiver of the AD patient can be best appreciated by viewing the evolution of the symptoms as the disease progresses through time. The Global Deterioration Scale (GDS) (16-21) is a global measure designed for the assessment of cognitive decline in normal aging and AD (Table 1). It is based on a composite impression of the patient's status encompassing the areas of cognition, functional (IADL/ADL) and behavioural changes. Most significantly, the GDS allows for a detailed elucidation of symptoms characterizing the full range of memory impairment-from normal aging (GDS Stage 1) to the most severe stage of AD (GDS Stage 7) (16- 22).

A crucial element of the GDS is that it is both an ordinal (i.e. the stages are "ranked" in such a way that a higher numbered stage implies greater impairment than the stage immediately preceding it) and hierarchical (i.e. the less impaired stages integrate and govern the adaptive functions of the organism) scale. Thus, as patients advance through the GDS stages associated with the clinical diagnosis of AD they exhibit more and more observable and devastating impairment. Therefore, as the AD patient moves from a "less impaired stage" to a "more impaired stage" there is

TABLICA 1. Ljestvica globalnog pogoršanja (GDS) – AB-u pogoršanje prati predvidljivi klinički tijek*
TABLE 1. The Global Deterioration Scale (GDS) - Deterioration in AD Follows A Predictable Clinical Course*

GDS Stadij 1 = Normalo starenje / GDS Stage 1 = Normal Aging
GDS Stadij 2 = Subjektivno kognitivno oštećenje / GDS Stage 2 = Subjective Cognitive Impairment
GDS Stadij 3 = Početna faza AB-a (blago kognitivno oštećenje) / GDS Stage 3 = Incipient AD (Mild Cognitive Impairment)
GDS Stadij 4 = Blagi AB / GDS Stage 4 = Mild AD
GDS Stadij 5 = Umjeren AB / GDS Stage 5 = Moderate AD
GDS Stadij 6 = Umjereno težak AB / GDS Stage 6 = Moderately Severe AD
GDS Stadij 7 = Težak AB / GDS Stage 7 = Severe AD

*Bibliografija / *References
Reisberg B. *et al*. Amer J Psychiat 1982;139:1136-9.
Reisberg B. *et al*. The Global Deterioration Scale (GDS). Psychopharmacol Bull 1988;24:661-3.

pomagala namijenjena određenim tipovima ponašanja kao što su Cohen-Mansfieldov inventar agitacije (27) te Inventar apatije (28). No, navedene ljestvice nisu posebno osmišljene samo za AB ili su osmišljene za procjenu isključivo malog dijela spektra poremećaja u ponašanju kod AB-a. S druge strane, Ljestvica ponašajne patologije Alzheimerove bolesti (BEHAVE-AD; prema engl. *Behaviour Pathology in Alzheimer's Disease Rating Scale*) (29-31) posebno je osmišljena za procjenu ponašajnih poremećaja kod pacijenata s AB-om. Ono što je također važno jest da se njome može procijeniti ponašajne poremećaje kod pacijenata s AB-om tijekom cijelog tijeka bolesti – od 4. stadija GDS-a (na kojem je moguće postaviti kliničku dijagnozu AB-a) do konačnog stadija bolesti u kasnijem dijelu 7. stadija GDS-a (29-32). Ljestvica sadrži 25 čestica podijeljenih u 7 kategorija (tablica 2). Njegovatelj procjenjuje svaku od čestica prema težini simptoma koristeći ljestvicu s četiri moguća odgovora, od „0" (nije prisutno) do „3" (jako izraženo).

Već je utvrđeno da pacijenti ne postižu jednake rezultate na svih 25 čestica ljestvice BEHAVE-AD (31,33,34). To je posljedica vremenskih aspekata bolesti, kao i jedinstvene dinamične prirode neuroanatomskog/neurokemijskog pogoršanja u AB-u. No, učestalost pojave (33) nekih od najčešćih kategorija simptoma kao funkcije stadija GDS-a uključuje:

TABLICA 2. Ljestvica ponašajne patologije Alzheimerove bolesti (BEHAVE-AD)*
TABLE 2. Behavioural Pathology in Alzheimer's Disease Rating Scale (BEHAVE-AD)*

Kategorije ljestvice BEHAVE-AD / BEHAVE – AD Rating Categories
Paranoidne i sumanute misli / Paranoid & Delusional Ideation
Halucinacije / Hallucinations
Poremećaji aktivnosti / Activity Disturbances
Agresija / Aggression
Poremećaji dnevnog ritma / Diurnal Rhythm Disturbance
Afektivni poremećaji / Affective Disturbance
Anksioznosti i fobije / Anxieties & Phobias

*Bibliografija / *Reference
Reisberg B *et al*. J Clin Psychiatry 1987; 48(Suppl): 9-15.

an increase in severity of clinical symptoms – including the potential manifestation of aberrant behavioural and psychological disturbances.

Frequently used rating scales for the assessment of behavioural problems in AD include the Neuropsychiatric Inventory (23,24), the Behaviour Rating Scale for Dementia of the Consortium to Establish a Registry for Alzheimer's Disease (25), the Dementia Behaviour Disturbance Scale (26) and other instruments targeting specific behaviours such as the Cohen-Mansfield Agitation Inventory (27) and the Apathy Inventory (28). However, these scales were either not specifically designed solely for AD or were designed to evaluate only a small, specialized, portion of the spectrum of the behavioural disturbances in AD. Conversely, the Behaviour Pathology in Alzheimer's Disease Rating Scale (BEHAVE-AD) (29-31) was specifically designed to assess behavioural disturbance in AD patients. Additionally, and importantly, it too allows for the evaluation of behavioural disturbance in AD patients through the entire course of the illness – from GDS Stage 4 (where a clinical diagnosis of AD can be made) to the final stage of the illness in the latter half of GDS Stage 7 (29-32). The scale contains 25 items divided into 7 categories (Table 2). Each item is rated for severity of symptom by the caregiver along a 4-point scale ranging from "0" (not present) to "3" (severely manifest).

It has previously been cited that not all patients always score on all of the 25 items of the BEHAVE-AD (31,33,34). This is due to both the temporal aspects of the illness as well as the unique dynamic nature of the neuroanatomic/neurochemical deterioration of AD. However, the frequency of occurrence (33) of some of the commonly occurring symptom categories as a function of GDS Stage include:

1. **Paranoidne i sumanute misli** = vrhunac % na 5. stadiju GDS-a (npr. „ljudi kradu stvari“, „ovo nije moj dom“)
2. **Poremećaj aktivnosti** = vrhunac % na 6. stadiju GDS-a (npr. lutanje, vrpoljenje)
3. **Agresivnost** = vrhunac % na 6. stadiju GDS-a (npr. verbalni ispadi, fizički napad)
4. **Poremećaj sna** = vrhunac % na 5. stadiju GDS-a (npr. poremećaj dnevnog ritma)
5. **Anksioznosti** = vrhunac % na 5. stadiju GDS-a (npr. ponavljanje pitanja)

Bitno je upozoriti na nekoliko stvari. Kao prvo, s obzirom da pacijenti ne postižu jednake rezultate na svim česticama, valjana strategija analize utjecaja stresa/tereta ponašajnih simptoma na njegovatelja uključivala bi procjenu podataka na temelju postignutih rezultata po kategorijama (tj. prosječne „težine“ kategorija)/stadiju GDS-a umjesto na temelju samo učestalosti pojave/kategorija/stadija GDS-a. Kao drugo, pokazalo se da kod težih kroničnih bolesti (npr. raka) rezultati težine točnije odražavaju probleme kvalitete života i psihološki nemir od rezultata učestalosti (35). Rezultati našeg istraživanja (34) pokazuju niže prosječne ukupne rezultate ljestvice BEHAVE-AD za pacijente na 4. i 7. stadiju GDS-a te više rezultate za pacijente na 5. i 6. stadiju GDS-a (tj. veću težinu na 5. i 6. stadiju GDS-a). To ne začuđuje – pacijenti na 4. stadiju GDS-a nemaju ozbiljno pogoršanje, dok pacijenti na 7. stadiju GDS-a (vrlo teška Alzheimerova bolest) imaju ozbiljno pogoršanje na svim kognitivnim i funkcionalnim područjima. Pacijenti na 7. stadiju GDS-a često primaju njegu u staračkim domovima od stručnih njegovatelja umjesto od članova obitelji i/ili neformalnih njegovatelja koji imaju veću vjerojatnost da ih uznemire poremećaji u ponašanju.

DEMENCIJA LEWYJEVIH TJELEŠACA (DLT) I FRONTOTEMPORALNA DEMENCIJA (FTD)

Ponašajni poremećaji dio su simptomatske slike demencije Lewyjevih tjelešaca (DLT) i frontotemporalne demencije (FTD) (36,37).

1. **Paranoid & Delusional Ideation** = peak % at GDS Stage 5 (e.g. “people are stealing things”; “this is not my home”)
2. **Activity Disturbance** = peak % at GDS Stage 6 (e.g. wandering; fidgeting)
3. **Aggressiveness** = peak % at GDS Stage 6 (e.g. verbal outbursts; physical assaults)
4. **Sleep Disturbance** = peak % at GDS Stage 5 (e.g. diurnal rhythm disturbance)
5. **Anxieties** = peak % at GDS Stage 5 (e.g. repetitive questions)

Several caveats should be noted. Firstly, since not all patients score on all items, a reasonable strategy for analysis of the impact of stress/burden of the behavioural symptoms on the caregiver would be to evaluate the data in terms of the category scores (i.e. mean “severity” of category)/GDS Stage rather than just frequency of occurrence/category/GDS Stage. Secondly, it has been demonstrated that in more oppressive chronic illnesses (e.g. cancer) the severity scores more accurately reflect issues of quality of life and psychological distress than frequency scores (35). The results of our research (34) demonstrate lower mean total BEHAVE-AD scores for patients at GDS Stages 4 & 7 and higher scores for patients at GDS stages 5 & 6 (i.e. greater rating of severity at GDS stages 5 & 6). This is not surprising – patients at GDS stage 4 are not severely deteriorated while patients at GDS stage 7 (very severe AD) are, for the most part, severely compromised in just about all cognitive and functional spheres. Furthermore, patients at GDS stage 7 are frequently cared for within the context of a nursing home with professional care rather than family members and/or informal caregivers who are more likely to be disturbed by the aberrant behaviour.

LEWY BODY DEMENTIA (DLB) AND FRONTOTEMPORAL DEMENTIA (FTD)

Both Lewy Body Dementia (LBD) and Frontotemporal Dementia (FTD) display behavioural disturbances as part of their symptomatic pic-

No, njihovi se ponašajni profili međusobno razlikuju, a drugačiji su i od ponašajnog profila AB-a. Što se tiče DLT-a, primijećeno je da se kognitivni poremećaj mijenja, s ranim i donekle istaknutim pojavljivanjem vizualnih halucinacija i poremećajem sna (37). Pacijenti često imaju prolazne ali sustavne sumanute misli te imaju poteškoća sa složenim kognitivnim zadatcima (npr. rješavanje problema, izvršavanje više zadataka odjednom, itd.), dok se teškoće u pamćenju javljaju kasnije u tijeku bolesti (37). Također je primijećeno da demencija povezana s kasnijim stadijima Parkinsonove bolesti može na neki način biti povezana s DLT-om, s obzirom na sličnost njihovih profila (38). Profil FTD-a značajno se razlikuje od onog AB-a i DLT-a. Poremećaj počinje mnogo ranije u životu te se često dijagnosticira između 45. i 50. godine života (36). Iako halucinacije i sumanute misli nisu česte u FTD-u, ponašajni poremećaji su zamjetni: neprimjereni socijalni postupci, nedostatak socijalnog prosuđivanja, kompulzivna ponašanja koja se ponavljaju, prejedanje (pogotovo slatkišima), poteškoće u govoru (logika i sintaksa, ali ne i problemi s odabirom riječi) te nedostatak subjektivne svijesti o promjenama u razmišljanju i ponašanju (36,39). Ti se problemi pojavljuju vrlo rano u razvoju poremećaja te nastupaju prije očitih poteškoća s pamćenjem i razmišljanjem u demenciji (36,39).

ZAKLJUČAK

Iz gore navedenog opisa ponašajnih poremećaja u demenciji jasno je zašto oni njegovateljima pacijenata predstavljaju glavni izvor stresa i/ili tereta. Očito je da, primjerice, u kontekstu starijeg supružnika koji se kod kuće brine za pacijenta, takvi poremećaji mogu biti glavni poticaj za hospitalizaciju pacijenta. Kada je riječ o takvim problemima kod starijih ljudi, liječenje (a naročito psihofarmakološke intervencije) se mora provoditi s posebnim oprezom zbog velike vjerojatnosti za nepoželjne psihološke, neurološke i psihijatrijske nuspojave i komplikacije.

ture (36,37). However, their behavioural profiles differ from each other and, also, from that of AD. Regarding LBD, it has been observed that the cognitive disturbance fluctuates with an early and somewhat prominent appearance of visual hallucinations and sleep disorder (37). The patients will often exhibit transitory but systematized delusions and have difficulty with complex cognitive tasks (e.g. problem solving, multi-tasking, etc.) rather than a primary memory deficit which comes later in the disorder (37). It has also been noted that the dementia associated with the latter stages of Parkinson's Disease may be related, in some way, to LBD as the profiles are similar (38). The profile for FTD is quite different from that of both AD and LBD. The disorder starts much earlier in life and is frequently diagnosed at age 45-50 years (36). Although hallucinations and delusions are uncommon in FTD, the behavioural disturbances are striking: inappropriate social actions, lack of social judgement, repetitive compulsive behaviours, overeating (especially sweets), problems with speech (logic and syntax, not word finding difficulties), and a subjective unawareness of thinking and behavioural changes (36,39). These problems occur quite early in the evolution of the disorder and precede the obvious memory and cognitive deficits of the dementia (36, 39).

CONCLUSION

From the above descriptions of the behavioural disturbances of dementia it can be clearly understood why they are the major source of stress and/or burden for the caregiver of the patient. Furthermore, it is evident how such disturbance, in the context of an elderly spouse (for example) caring for a dementia patient at home, can serve as a primary stimulus for institutionalization of the patient. Treatment, especially psychopharmacological intervention, for these problems in the elderly must be handled with great care because of the high potential for adverse physiological, neurological and psychiatric side effects and complications.

1. Alzheimer's Research U.K. [Internet]. 2018. Different types of dementia. Available from: https://www.dementiastatistics.org/statistics/different-types-of-dementia/
2. Alzheimer's Association [Internet]. 2019. What is dementia? Available from: https://www.alz.org/alzheimers-dementia/what-is-dementia/types-of-dementia
3. Ory M, Hoffman RR, Yee YL, Tennstedt S, Schulz R. Prevalence and impact of caregiving: A detailed comparison between dementia and nondementia caregivers. Gerontologist 1999; 39(2): 177-85.
4. Thyrian JR, Eichler T, Hertel J, Wucherer D, Dreier A, Michalowsky B *et al*. Burden of behavioral and psychiatric symptoms in people screened positive for dementia in primary care: Results of the DelpHi study. J Alzheimers Dis 2015; 46(2): 451-9.
5. Terum TM, Andersen JR, Rongve A, Aarsland D, Svendsboe EJ, Testad I. The relationship of specific items on the Neuropsychiatric Inventory to caregiver burden in dementia: A systematic review. Int J Geriatr Psychiatry 2017; 32(7): 703-17.
6. Burns A. The burden of Alzheimer's Disease. Int J Geriatr Neuropsychopharmacol 2000; 3(7): 31-8.
7. Allegri R, Sarasola D, Serrano CM, Taragano FE, Arizaga RL, Butman J *et al*. Neuropsychiatric symptoms as a predictor of caregiver burden in Alzheimer's Disease. Neuropsychiatr Dis Treat 2006; 2(1): 105-10.
8. Aguera-Ortiz L, Frank-Garcia A, Gil P, Moreno A, 5E Study Group. Clinical progression of moderate-to-severe Alzheimer's Disease and caregiver burden: A 12-month multicenter prospective observational study. Int Psychogeriatr 2010; 22(8): 1265-79.
9. Bergvall N, Brinck P, Eek D, Gustavsson A, Wimo A, Winblad B *et al*. Relative importance of patient disease indicators on informal care and caregiver burden in Alzheimer's Disease. Int Psychogeriatr 2011; 23(1): 73-85.
10. Isik AT, Soysal P, Solmi M, Veronese N. Bidirectional relationship between caregiver burden and neuropsychiatric symptoms in patients with Alzheimer's Disease: A narrative review. International J Geriatr Psychiatry 2019; 34(9): 1326-34.
11. Reed C, Belger M, Scott Andrews J, Tockhorn-Heidenreich A, Jones RW *et al*. Factors associated with long-term impact on informal caregivers during Alzheimer's Disease dementia progression: 36-month results from GERAS. Int Psychogeriatr 2019; 1-11. doi: 10.1017/S1041610219000425
12. de Vugt ME, Stevens F, Aalten P, Lousberg R, Jaspers N, Verhey FR. A prospective study of the effects of behavioral symptoms on the institutionalization of patients with dementia. Int Psychogeriatr 2005; 17(4): 577-89.
13. Gaugler JE, Yu F, Krichbaum K, Wyman JF. Predictors of nursing home admission for persons with dementia. Med Care 2009; 47(2): 191-8.
14. Bathgate D, Snowden JS, Varma A, Blackshaw A, Neary D. Behaviour in frontotemporal dementia, Alzheimer's disease and vascular dementia. Acta Neurol Scand 2001; 103(6): 367-78.
15. Srikanth S, Nagaraja AV, Ratnavalli E. Neuropsychiatric symptoms in dementia-frequency, relationship to dementia severity and comparison in Alzheimer's Disease, vascular dementia and frontotemporal dementia. J Neurol Sci 2005; 236(1-2): 43-8.
16. Reisberg B, Ferris SH, de Leon MJ, Crook T. The Global Deterioration Scale for assessment of primary degenerative dementia. Am J Psychiatry 1982; 139(9): 1136-9.
17. Reisberg B. The Brief Cognitive Rating Scale and Global Deterioration Scale. In: Crook T, Ferris S, Bartus R (ed). Assessment in geriatric psychopharmacology. New Canaan: Mark Powley Assoc. Inc., 1983, pp 19-35.
18. Reisberg B. Dementia: A systematic approach to identifying reversible causes. Geriatrics 1986; 41(4): 30-46.
19. Reisberg B, Ferris SH, de Leon MJ, Crook T. Global Deterioration Scale (GDS). Psychopharmacol Bull 1988; 24(4): 661-3.
20. Reisberg B, Ferris SH, Kluger A, Franssen E, de Leon MJ, Mittelman M *et al*. Symptomatic changes in CNS aging and dementia of the Alzheimer type: Cross-sectional, temporal and remediable concomitants. In: Bergener M, Reisberg B (ed). Diagnosis and treatment of senile dementia. Berlin: Springer-Verlag, 1989, pp 193-223.
21. Reisberg B, Sclan SG, Franssen E, Kluger A, Ferris S. Dementia staging in chronic care populations. Alzheimer Dis Assoc Disord 1994; 8(Suppl 1): S188-205.
22. Auer S, Sclan SG, Yaffee RA, Reisberg B. The neglected half of Alzheimer's Disease: Cognitive and functional concomitants of severe dementia. J Am Geriatr Soc 1994; 42(12): 1266-72.
23. Cummings JL, Mega M, Gray K, Rosenberg-Thompson S, Carusi DA, Gornbein J. The Neuropsychiatric Inventory: Comprehensive assessment of psychopathology in dementia. Neurology 1994; 44: 2308-14.
24. Cummings J. The Neuropsychiatric Inventory Questionnaire: Background and Administration [Internet]. Available from: https://www.alz.org/media/Documents/npiq-questionnaire.pdf
25. The Behavior Rating Scale for Dementia of the Consortium to Establish a Registry for Alzheimer's Disease. The Behavioral Pathology Committee of the Consortium to Establish a Registry for Alzheimer's Disease. Am J Psychiatry 1995; 152(9): 1349-57.
26. Baumgarten M, Becker R, Gauthier S. Validity and reliability of the behavior disturbance scale. J Amer Geriatr Soc 1990; 38(3): 221-6.
27. Cohen-Mansfield J. Instruction Manual for the Cohen-Mansfield Agitation Inventory (CMAI). Rockville, MD: The Research Institute of the Hebrew Home of Greater Washington; 1991. [Internet] Available from: https://www.alz.org/media/Documents/npiq-questionnaire.pdf
28. Robert PH, Clairet S, Benoit M, Kouthich A, Bertogliati C, Tible O *et al*. The apathy inventory: Assessment of apathy and awareness in Alzheimer's Disease, Parkinson's Disease and mild cognitive impairment. Int J Geriatr Psychiatry 2002; 17(12): 1099-105.

29. Reisberg B, Borrenstein J, Franssen E, Shulman E, Steinberg G, Ferris SH. Remediable behavioral symptomatology in Alzheimer's disease. Hosp Community Psychiatry 1986; 37: 1199-201.
30. Reisberg B, Borenstein J, Salob SP, Ferris SH, Franssen E, Georgotas A. Behavioral symptoms in Alzheimer's Disease: Phenomenology and treatment. J Clin Psychiatry 1987; 48(Suppl): 9-15.
31. Reisberg B, Monteiro I, Torossian C, Auer S, Shulman MB, Ghimire S *et al*. The BEHAVE-AD assessment system: A perspective, a commentary on new findings, and a historical review. Dement Geriatr Cogn Disord 2014; 38(1-2): 89-146.
32. Auer SR, Sclan SG, Yaffee RA, Reisberg B. The neglected half of Alzheimer disease: cognitive and functional concomitants of severe dementia. J Am Geriatr Soc 1994; 42: 1266-72.
33. Reisberg B, Franssen E, Sclan S, Kluger A, Ferris SH. Stage specific incidence of potentially remediable behavioral symptoms in aging and Alzheimer disease: a study of 120 patients using the BEHAVE-AD. Bull Clin Neurosci 1989; 54: 95-112.
34. Sclan SG, Saillon A, Franssen E, Hugonot-Diener L, Saillon A, Reisberg B. The Behavioral Pathology in Alzheimer's Disease Rating Scale (BEHAVE-AD): reliability and analysis of symptom category scores. Int J Geriatr Psychiatry 1996; 11: 819-30.
35. Salsman J, Schalet B, Andrykowski M, Cella D. The Impact of Events Scale: A comparison of frequency versus severity approaches to measuring cancer-specific distress. Psychooncology 2015; 24(12): 1738-45.
36. Srikanth S, Nagaraja AV, Ratnavalli E. Neuropsychiatric symptoms in dementia – frequency, relationship to dementia severity and comparison in Alzheimer's Disease, vascular dementia and frontotemporal dementia. J Neurol Sci 2005; 236(1-2): 43-8.
37. Engelborghs S, Maertens K, Nagels G, Vloeberghs E, Marien P, Symons A *et al*. Neuropsychiatric symptoms of dementia: Cross-sectional analysis from a prospective, longitudinal Belgian study. Int J Geriatr Psychiatry 2005; 20(11): 1028-37.
38. American Parkinson Disease Association. [Internet]. 2019. Lewy Bodies, Dementia, and Parkinson's – What Does it all Mean? Available from: https://www.apdaparkinson.org/article/understanding-parkinsons-disease-dementia-lewy-bodies/
39. Alzheimer's Association. [Internet]. 2019. Frontotemporal Dementia. Available from: https://www.alz.org/alzheimers-dementia/what-is-dementia/types-of-dementia/frontotemporal-dementia

Anksiozni poremećaji u starijih osoba

/ Anxiety Disorders in Elderly

Alma Mihaljević-Peleš, Marina Šagud

Klinički bolnički centar Zagreb, Sveučilište u Zagrebu, Medicinski fakultet, Klinika za psihijatriju i psihološku medicinu, Zagreb, Hrvatska

/ Clinical Hospital Centre Zagreb, University of Zagreb, School of Medicine, Department for Psychiatry and Psychological Medicine, Zagreb, Croatia

Udio osoba starije životne dobi u stalnom je porastu u ukupnoj populaciji. Veći udio osoba starije životne dobi pridonosi promjeni morbiditeta karakterističnog za ovo razdoblje života. Anksioznost je jedan od najčešćih simptoma koji prati starije osobe, a posljedica je smanjenih tjelesnih i kognitivnih sposobnosti. Subsindromska anksioznost učestalija je među starijim osobama od depresije i kognitivnih poremećaja. U starijih osoba, stoga postoji „zabrinutost", koja je posljedica smanjenih sposobnosti i koju ne treba uvijek dijagnosticirati kao poremećaj. Prava anksioznost ili anksiozni poremećaj bitno umanjuju funkcionalnost osobe i zahtijevaju liječenje. Anksioznost i anksiozni poremećaji, očekivano imaju neka posebna obilježja, koja nećemo naći u odrasloj psihijatrijskoj populaciji. Sukladno tome potrebno je prepoznavati ta posebna obilježja anksioznosti u starijoj životnoj dobi, kako bi se s većom sigurnosti postavila dijagnoza i osiguralo pravodobno liječenje. Postupak i liječenje gerijatrijske anksioznosti također ima svoja posebna obilježja i pravila. Opća je preporuka da primjena psihofarmaka u starijoj životnoj dobi nije doživotna, te da se povlačenje lijekova mora odvijati u vrlo sporom ritmu od nekoliko mjeseci, kako ne bi došlo do ponovne pojave anksioznih simptoma.

***/** The proportion of older people is continuously increasing in the total population. A higher proportion of the elderly contribute to the change in morbidity characteristics of this period of life. Anxiety is one of the most common symptoms accompanying the elderly and is a consequence of diminished physical and cognitive abilities. Subsyndromal anxiety is more common among the elderly than depression and cognitive impairment. In the elderly, therefore, there exists a "concern" that results from impaired abilities and should not always be diagnosed as a disorder. True anxiety and/or anxiety disorder significantly impairs a person's functionality and requires treatment. Anxiety and anxiety disorders, as expected, have some special characteristics that we will not find in the adult psychiatric population. Accordingly, it is necessary to recognize these particular characteristics of anxiety in the elderly in order for them to be diagnosed with more attention and to ensure timely treatment. The procedure and treatment of geriatric anxiety also has its own special characteristics and rules. It is a general recommendation that the use of psychopharmacological agents in the elderly is not lifelong. Tapering from medication should last for several months in order to avoid the relapse of anxiety symptoms.*

ADRESA ZA DOPISIVANJE / *CORRESPONDENCE*:

Prof. dr. sc. Alma Mihaljević-Peleš, dr. med.
Klinika za psihijatriju i psihološku medicinu
KBC Zagreb
Kišpatićeva 12
10 000 Zagreb, Hrvatska
E-pošta: alma.mihaljevic.peles@mef.hr

KLJUČNE RIJEČI / *KEY WORDS*:

Anksiozni poremećaji / *Anxiety Disorders*
Dijagnostika / *Diagnostics*
Liječenje / *Treatment*
Starije osobe / *Older People*

TO LINK TO THIS ARTICLE: https://doi.org/10.24869/spsih.2019.283

UVOD

Zbog stalnog porasta broja starijeg stanovništva, njegova udjela u ukupnom stanovništvu i sve veće zastupljenosti kroničnih bolesti povećava se korištenje zdravstvenih, socijalnih i financijskih resursa zajednice (1). Zdravlje starijih osoba postaje sve značajniji problem i izazov za zdravstvenu službu i društvo u cjelini (2).

Anksioznost je jedan od najčešćih simptoma koji se primjećuje u starijih osoba. Subsindromalna anksioznost je učestalija od depresije i kognitivnih poremećaja. Najčešći anksiozni poremećaj koji se pojavljuje u kliničkoj praksi je generalizirani anksiozni poremećaj (7,8 %), zatim fobije (3,1 %), panični poremećaj (1 %) i opsesivno kompulzivni poremećaj (OKP) (0,6 %). Dvije indijske studije pokazale su da ukupna prevalencija anksioznih poremećaja iznosi 10,8 %, odnosno 10,7 % (3,4). Anksioznost je dakle, među svim drugim psihičkim poremećajima gerijatrijske populacije vrlo značajan poremećaj. Stoga je od velike važnosti pomoći psihijatrima u svakodnevnoj kliničkoj praksi da prepoznaju anksiozne poremećaje u starijoj populaciji, procijene ih, ispravno liječe i upravljaju nuspojavama lijekova.

KLINIČKA OBILJEŽJA I DIJAGNOZA ANKSIOZNOSTI U STARIJIH OSOBA

Novi klasifikacijski sustavi (tablica 1.) u DSM-5 uvode promjene u klasifikaciju anksioznih poremećaja (5,6). Kako će to biti u MKB-11 uskoro ćemo vidjeti.

Klinička prezentacija anksioznosti i anksioznih poremećaja očekivano se razlikuje kod starijih osoba i odrasle populacije bolesnika. U starijih osoba postoji „zabrinutost“, koju ne trebamo i ne možemo uvijek dijagnosticirati kao poremećaj. Treba imati na umu da se radi o vulnerabilnoj populaciji, koja zbog smanjenih sposobnosti, počinje razvijati anksioznost od izlaska

INTRODUCTION

Due to the continuous increase in the elderly population, its share in the total population, and the increasing prevalence of chronic diseases, the use of community health, social, and financial resources is increasing (1). The health of the elderly is becoming an increasingly significant problem and challenge for health services and society as a whole (2).

Anxiety is one of the most common symptoms seen in the elderly. Subsyndromal anxiety is more common than depression and cognitive impairment. The most common anxiety disorder that occurs in clinical practice is generalized anxiety disorder (7.8%), followed by phobias (3.1%), panic disorder (1%), and obsessive-compulsive disorder (OCD) (0.6%). Two Indian studies have shown that the overall prevalence of anxiety disorders is 10.8% and 10.7%, respectively (3,4). Therefore, anxiety is a significant disorder among all other psychiatric disorders of the geriatric population. It is of great importance to help psychiatrists to identify anxiety disorders in the elderly population in their daily clinical practice, evaluate them, properly treat them, and manage their side effects.

CLINICAL FEATURES AND DIAGNOSIS OF ANXIETY IN THE ELDERLY

The new classification systems (Table 1) with DSM-5 introduce changes to the classification of anxiety disorders (5,6). We will soon have a chance to see whether any changes are coming to ICD-11.

The clinical presentation of anxiety and anxiety disorders differs in the elderly population. In the elderly, there exists a “concern” which should not and cannot always be diagnosed as a disorder. We should keep in mind that this is a vulnerable population which, due to its reduced

TABLICA 1. Promjene u klasifikaciji anksioznih poremećaja u DSM-5 u odnosu na MKB-10.
TABLE 1. Changes in the classification of anxiety disorders in DSM-5 with respect to the ICD-10.

MKB-10 / ICD-10	DSM-5 / DSM-5
F40 Fobični anksiozni poremećaj / F40 Phobic anxiety disorders F40.0 agorafobija / F40.0 agoraphobia F40.1 socijalna fobija (antropofobija, socijalna neuroza) / F40.1 Social phobias (anthropophobia, social neurosis) F40.2 specifične fobije (akrofobija, animalofobija, klaustrofobija, jednostavne fobije) / F40.2 specific phobias (acrophobia, animal phobia, claustrophobia, simple phobia) F40.8 druge fobične anksioznosti / F40.8 other phobic anxiety disorders F40.9 fobični anksiozni poremećaji nespecificirani (nespecificirana fobija, nespecificirano fobično stanje) / F40.9 phobic anxiety disorder, unspecified (phobia NOS, phobic state NOS) **F41 Drugi anksiozni poremećaji / F41 Other anxiety disorders** F41.0 panični poremećaj (epizodična paroksizmalna anksioznost) / F41.0 Panic disorders (episodic paroxysmal anxiety) F41.1 generalizirani (opći) anksiozni poremećaj / F41.1 Generalized anxiety disorder	**Anksiozni poremećaji / Anxiety disorders** Separacijski anksiozni poremećaj / Separation anxiety disorder Selektivni mutizam / Selective mutism Specifična fobija / Specific phobia Socijalna fobija / Social phobia Panični poremećaj / Panic disorder Agorafobija / Agoraphobia Generalizirani (opći) anksiozni poremećaj / Generalized anxiety disorder
F42 Opsesivno kompulzivni poremećaj / F42 Obsessive-compulsive disorder	**Opsesivno kompulzivni poremećaji (posebno su klasificirani) / Obsessive-compulsive disorder (separate classification)** Opsesivno kompulzivni poremećaj / Obsessive-compulsive disorder Dismorfični tjelesni poremećaj / Body dysmorphic disorder Prikrivajući poremećaj / Hoarding disorder Trihotilomanija / Trichotillomania Poremećaj grebanja / Excoriation disorder
F43 Reakcije na teški stres i poremećaj prilagodbe / F43 Reaction to severe stress and adjustment disorder F43.0 akutna reakcija na stres / F43.0 acute stress reaction F43.1 posttraumatski stresni poremećaj / F43.1 posttraumatic stress disorder F43.2 poremećaj prilagodbe / F43.2 adjustment disorder	**Trauma i stresom izazvani poremećaji / Trauma and stressor-related disorder (separate classification)** Reaktivni poremećaj zbog povezanosti / Reactive attachment disorder Dezinhibirani poremećaj socijalnog ponašanja / Disinhibited social engagement disorder Posttraumatski stresni poremećaj / Posttraumatic stress disorder Akutna reakcija na stres / Acute stress reaction Poremećaj prilagodbe / Adjustment disorder

iz kuće zbog mogućih padova. Koliko ova anksioznost utječe na smanjenje funkcionalnosti, trebamo utvrditi detaljnim ispitivanjem povijesti bolesti (7). Kod ispitivanja anamneze treba voditi računa o sljedećim podatcima:

a) Značajni životni i medicinski podatci:
bračno stanje, mjesečni prihodi, stanovanje – osamljenost i socijalna podrška, prisutne bolesti i kronična stanja, upotreba sredstava ovisnosti i lijekova, kognitivna oštećenja, vidna i slušna oštećenja, sposobnost vođenja brige o osobnoj higijeni i oblačenju, nedavni životni stresori – gubitak bliskih osoba, obiteljski hereditet

b) Lijekovi koji potiču anksioznost:
levodopa, amantadin, bromokriptin, ciklosporin, interferon, hormoni štitnjače, kofein, amfetamin i sl.

c) Rizični čimbenici za anksioznost u starijih osoba:

abilities, develops anxiety of leaving the home because of the possibility of falling. In order to determine to what extent this anxiety influences the decrease in functionality, a detailed medical history needs to be examined (7). The following information should be considered when taking a medical history:

a) Significant life-related and medical information:
marital status, income, loneliness and social support, illnesses and chronic conditions, use of drugs and medications, cognitive impairment, visual and hearing impairment, ability to take care of personal hygiene and dressing, recent life stressors - loss of loved ones, family heredity

b) Medications that can cause anxiety:
levodopa, amantadine, bromocriptine, cyclosporine, interferon, thyroid hormones, caffeine, amphetamine, etc.

ženski spol, slabija obrazovanost, siromaštvo, udovac/ica, rastava, kronične bolesti i traumatska iskustva iz djetinjstva

d) Psihološki čimbenici:
neuroticizam, slabe socijalne vještine, druge psihičke bolesti, kognitivna oštećenja, prethodni teži psihički poremećaji

Sukladno tome, o gore navedenim podatcima, trebamo voditi računa kod dijagnosticiranja anksioznosti i anksioznih poremećaja u starijih osoba. Kako bi naša dijagnostika bila što bolja, trebamo obratiti pažnju na različitost obilježja anksioznih dijagnoza u starijoj populaciji. U tablici 2. navodimo posebna obilježja anksioznih poremećaja u starijoj populaciji bolesnika.

Kod starije populacije prije postavljanja dijagnoze nekog od anksioznih poremećaja svakako treba provjeriti postojanje drugih psihijatrijskih poremećaja i/ili tjelesnih bolesti i poremećaja starije osobe. Ponovo podsjećamo da su dobro ispitana anamneza i pažljiva tjelesna obrada ključni u dijagnostici ovih poremećaja.

Postoje i psihijatrijski instrumenti, koji su prilagođeni za dijagnostiku i otkrivanje anksio-

c) Risk factors for anxiety in the elderly:
female gender, low education, poverty, widower, divorce, chronic illnesses, and traumatic experiences from childhood

d) Psychological factors:
neuroticism, poor social skills, other psychiatric illnesses, cognitive impairment, previous severe psychiatric disorders

The above information should be taken into consideration when diagnosing anxiety and anxiety disorders in the elderly. In order to ensure the accuracy of the diagnosis, we should pay attention to the different characteristics of anxiety disorders in the elderly population. Table 2 lists the specific characteristics of anxiety disorders in the elderly patient population.

In the elderly population, the existence of other psychiatric disorders and/or physical illnesses and disorders should be checked before diagnosing any anxiety disorder. Again, a well-taken history and careful physical processing are crucial in the diagnosis of these disorders.

There are also psychiatric instruments, which are tailored for diagnosing and detecting anxiety in the elderly population. For an accurate diagnosis of anxiety in this population, it is

TABLICA 2. Posebna obilježja anksioznih poremećaja u starijoj populaciji bolesnika
TABLE 2. Specific characteristics of anxiety disorders in the elderly patient population

Poremećaj / Disorders	Obilježja / Features
Specifične fobije / Specific phobias	Uobičajeno ima rani početak / It usually has an early start Rijetke u starosti, specifičan je strah od padova / Rare in old age, there is a specific fear of falls
Generalizirani anksiozni poremećaj / Generalized anxiety disorder	Uobičajeno rani početak / Usually an early start Viđa se subsindromski u starosti, strah od bolesti i sl. / Observed as subsyndromal in old age, fear of illness, etc.
Socijalna fobija / Social phobia	Uobičajeno rani početak / Usually an early start Rijetko se dijagnosticira u starosti zbog smanjenja socijalnih interakcija / It is rarely diagnosed in old age due to a decrease in social interactions
PTSP / PTSD	U starosti je subsindromski i kroničan, česta su ponovna proživljavanja traume osobito u ratnih veterana / It is subsyndromal and chronic in old age, traumatic relapses are common, especially in war veterans
Panični poremećaj / Panic disorder	Vrlo rijetko u starijoj životnoj dobi / Very rare in old age Panične atake vidimo u okviru egzistencijalne anksioznosti / Panic attacks occur as part of existential anxiety
Opsesivno kompulzivni poremećaj / Obsessive-compulsive disorders	U starosti obično je dio bihevioralnih i psihičkih poremećaja vezan uz demenciju ili u okviru poremećaja povezanog sa zloporabom psihoaktivnih supstancija / In old age, it is usually part of behavioural and psychiatric disorders related to dementia or within the framework of disorders related to substance abuse

znosti u starijoj populaciji.Za dobru dijagnostiku anksioznosti u ovoj populaciji dobro je koristiti neki od razvijenih instrumenata za starije pacijente poput Gerijatrijske ljestvice za anksioznost ili pak Gerijatrijskog upitnika za anksioznost. Na sl. 1. prikazujemo originalni izgled ovog instrumenta – skraćenu verziju od 10 čestica (8,9). Noel i sur. su 2018. godine pokazali da su obje ljestvice jednako vrijedne u otkrivanju anksioznosti starijih bolesnika (10).

ZBRINJAVANJE I LIJEČENJE ANKSIOZNOSTI U STARIJOJ ŽIVOTNOJ DOBI

Kada jednom utvrdimo radi li se o normalnom starenju, anksioznosti, depresiji, kognitivnim promjenama ili demenciji, možemo ponuditi najbolji mogući tretman tegoba koje ima starija osoba.

Anksioznost se općenito uglavnom liječi ambulantno. Bolničko liječenje je iznimka i koristi se

helpful to use some of the developed instruments for older patients, such as the Geriatric Anxiety Scale or the Geriatric Anxiety Questionnaire. Figure 1 shows the original design of this instrument - a shortened version of 10 items (8,9). In 2018, Noel et al. showed that both scales are equally valuable in detecting anxiety in older patients (10).

MANAGEMENT AND TREATMENT OF ANXIETY IN OLD AGE

Once we determine whether it is normal aging, anxiety, depression, cognitive changes, or dementia, the elderly can be offered the best possible treatment.

Anxiety is generally treated in outpatient care. Hospital treatment is an exception and is used in the following situations: if there is comorbid depression and suicidality, if the anxiety condition is resistant to treatment, e.g. OCD, if the elderly person should be excluded from extremely stressful life circumstances, or when

Ispod se nalazi popis čestih simptoma anksioznosti i stresa. Molimo vas da pomno pročitate svaku od točaka na popisu. Označite koliko često ste osjetili svaki od navedenih simptoma tijekom PROŠLOG TJEDNA, UKLJUČUJUĆI DANAŠNJI DAN tako što ćete staviti oznaku ispod odgovarajućeg odgovora.
/ Below is a list of common symptoms of anxiety or stress. Please read each item in the list carefully. Indicate how often you have experienced each symptom during the PAST WEEK, INCLUDING TODAY by checking under the corresponding answer.

	Nikada / Not at all (0)	Ponekad / Sometimes (1)	Većinu vremena / Most of the time (2)	Cijelo vrijeme / All of the time (3)
1. Osjećao/la sam se razdražljivo. / I was irritable.				
2. Osjećao/la sam se povučeno ili izolirano od drugih. / I felt detached or isolated from others.				
3. Osjećao/la sam se ošamućeno. / I felt like I was in a daze.				
4. Teško mi je bilo mirno sjediti. / I had a hard time sitting still.				
5. Nisam mogao/la kontrolirati svoju zabrinutost. / I could not control my worry.				
6. Osjećao/la sam se nemirno, nervozno ili živčano. / I felt restless, keyed up, or on edge.				
7. Osjećao/la sam se umorno. / I felt tired.				
8. Mišići su mi bili napeti. / My muscles were tense.				
9. Osjećao/la sam se kao da nemam kontrolu nad svojim životom. / I felt like I had no control over my life.				
10. Osjećao/la sam se kao da će mi se nešto grozno dogoditi. / I felt like something terrible was going to happen to me.				

SLIKA 1. Gerijatrijska ljestvica za anksioznost – verzija od 10 čestica (prema Mueller i sur. 2015.)
FIGURE 1. Geriatric Anxiety Scale – 10 item version (according to Mueller et al. 2015)

u sljedećim situacijama: ako postoji komorbidna depresija i suicidalnost, ako je anksiozno stanje rezistentno na liječenje, npr. OKP, ako stariju osobu treba ukloniti iz iznimno stresnih životnih okolnosti ili kad postoji komorbidna tjelesna bolest, koja zahtijeva medicinsku evaluaciju.

Postupak i liječenje uključuje nefarmakološko i farmakološko liječenje. Prije nego objasnimo mogućnosti liječenja osobito je važno educirati njegovatelja. Educiran i poticajan njegovatelj starije osobe jedna je od najvažnijih karika u liječenju starije populacije. Osim informacija o samom poremećaju potrebno je njegovatelja poučiti umjetnosti komuniciranja sa starijom osobom, npr.:

- uvijek morate govoriti umjerenim i umirujućim tonom
- koristite jednostavne riječi i rečenice, govorite sporo
- kada dajete uputu, dajte samo jednu uputu
- ako nudite izbor, ponudite samo dvije opcije
- nemojte koristiti pogrdne izraze i riječi
- nemojte gubiti strpljenje.

NEFARMAKOLOŠKO LIJEČENJE

Nefarmakološko liječenje je liječenje koje uključuje različite pristupe, povoljnije i prihvatljivije od farmakološkog liječenja. Savjetuju se sljedeće metode i tehnike:

- strukturirane dnevne aktivnosti, koje se rutinski provode, smanjuju anksioznost kod starijih osoba
- redovne tjelesne vježbe i fizička aktivnost, šetnja vrtom, plivanje i sl.
- redoviti san, koji je u ovoj dobi skraćen pa ga treba prilagoditi toj činjenici
- bihevioralna terapija: relaksacija, sistemska desenzitizacija, izlaganje i prevencija odgovora kod OKP-a i sl.

there is a comorbid physical condition requiring medical evaluation.

Management and treatment include non-pharmacological and pharmacological treatment. Before explaining treatment options, it is especially important to educate the caregiver. An educated and supportive caregiver is the most important link in the treatment of the elderly. Apart from providing information about the disorder, the caregiver should be instructed about the art of communication with the elderly, for example:

- you must always speak in a moderate and soothing tone
- use simple words and sentences, speak slowly
- when giving directions, give only one instruction
- if you offer a choice, offer only two choices
- do not use derogatory terms and words
- do not lose patience

NON-PHARMACOLOGICAL TREATMENT

Non-pharmacological treatment is treatment that involves different approaches, and is more favourable and acceptable than pharmacological treatment. The following methods and techniques are advised:

- structured daily activities, which are routinely performed, reduce anxiety in the elderly
- regular physical exercises and physical activity, walking in the garden, swimming, etc.
- regular sleep, which is shortened at this age, so it needs to be adjusted
- behavioural therapy: relaxation, systematic desensitization, exposure, and prevention of response in OCD, etc.
- cognitive behavioural therapy used to address some specific parts of life

- kognitivno bihevioralna terapija za rješavanje nekih posebnih dijelova života
- „*Mindfulness*“: tehnika harmonizacije doživljaja uma i osjećaja tijela.
- različite vrste terapija: joga, „art terapija“, terapija plesom, muzikoterapija, vježbanje socijalnih aktivnosti, kognitivna rehabilitacija i druge alternativne metode (masaža, refleksoterapija itd.)

FARMAKOLOŠKO LIJEČENJE

Ako nefarmakološke metode ne poluče zadovoljavajuću regresiju simptoma, uvode se lijekovi s općom napomenom da se primjenjuju u što manjim dozama i što kraće. U starijoj populaciji stvarno treba slijediti uputu:

„*Start low – go slow*“ («Kreni nisko – idi polako»)

Antidepresivi i pojačivači učinka

Uobičajeno je da su prva linija liječenja u starijih osoba lijekovi iz skupine SSRI (selektivni inhibitori ponovne pohrane serotonina). Ako prvi izbor ne poluči uspjeh, može se prijeći na drugi i treći izbor. Uvijek treba počinjati s pola preporučene doze, a srednja doza uvijek treba biti niža od preporučene doze za mlađu odraslu populaciju bolesnika. Osim mijenjanja antidepresiva, moguće je koristiti i pojačavajuću terapiju gabapentinom, valproatom, karbamazepinom, propranololom ili antihistaminikom, ali ne duže od dva tjedna. U tablici 3. prikazujemo prvu, drugu i treću linija izbora lijekova u nekim anksioznim poremećajima starijih.

Pri primjeni lijekova u starijoj životnoj dobi treba voditi računa o komorbidnim stanjima, zbog čega se mogu razviti nepoželjne nuspojave.Posebno treba obratiti pažnju na: produženje QT_C intervala, povišen tlak, povišen očni tlak, antikolinergičke učinke, hiponatremija,

- “mindfulness”: a technique for harmonizing the experience of mind and body.
- different types of therapies: yoga, “art therapy”, dance therapy, music therapy, social activity exercise, cognitive rehabilitation, and other alternative methods (massage, reflexology, etc.)

PHARMACOLOGICAL TREATMENT

If non-pharmacological treatment does not obtain a satisfactory regression of symptoms, medication should be introduced. The general recommendation is that medications be administered in low dosages and as briefly as possible. It is very important to follow this instruction in the case of the elderly:

“Start low – go slow”

Antidepressants and augmentation medications

The first line of treatment in the elderly is usually SSRI (selective serotonin reuptake inhibitor). If the first choice does not succeed, the second and third choices should be employed. We should always start with half of the recommended dosage, and the median dosage should always be lower than the recommended dosage for the younger adult patient population. In addition to changing antidepressants, augmentation therapy with gabapentin, valproate, carbamazepine, propranolol, or antihistamine may be used for no more than two weeks. In table 3, we show the first, second, and third line of drug selection in some anxiety disorders in the elderly.

When administering medications to the elderly, one should be aware of comorbid disorders in order to prevent the development of undesirable side effects. Particular attention should be paid to: QTC prolongation, hypertension,

TABLICA 3. Primjena lijekova u starijoj populaciji u prvoj, drugoj i trećoj liniji
TABLE 3. Administration of drugs in the elderly population in the first, second, and third line

Liječenje / Treatment	GAP / GAD	Fobije / Phobias	Panični poremećaj / Panic disorders
Prva linija / First line	SSRI, SNRI, buspiron / SSRI, SNRI, buspirone	SSRI, RIMA / SSRI, RIMA	SSRI, SNRI / SSRI, SNRI
Druga linija / Second line	mirtazapin, pregabalin, TCA, tianeptin / mirtazapine, pregabalin, TCA, tianeptine	SNRI / SNRI	TCA / TCA
Treća linija / Third line	benzodiazepini / benzodiazepines	benzodiazepini, MAOI / benzodiazepines, MAOI	benzodiazepini, MAOI / benzodiazepines, MAOI

sindrom sustezanja nakon ukidanja lijekova, serotoninski sindrom pri kombinacijama, hiponatremija i sl.

Benzodiazepini

Nerijetko se u početku liječenja ordiniraju i benzodiazepini. Benzodiazepini ne bi smjeli dugo ostati u terapiji, već nakon 2 tjedna treba smanjivati dozu i ići prema ukidanju prije kraja 4 do 6 tjedna liječenja. Benzodiazepine treba izbjegavati u ovoj dobi, a specifične indikacije su sindrom sustezanja od alkohola, preanestetička medikacija, epilepsija ili izrazito teška anksioznost. Sami benzodiazepini povećavaju vjerojatnost od padova, izazivaju konfuziju i smanjuju kognitivne sposobnosti, a mogu uzrokovati i paradoksnu anksioznost i agitaciju.

U slučaju razvijene ovisnosti na benzodiazepine u određenim slučajevima može se pokušati ukinuti benzodiazepin. Ukidanje se provodi tako da se ordinira zamjenski benzodiazepin produženog djelovanja, a potom se u sporom ritmu ukida po nekoliko tjedana.

ZAKLJUČAK

Svu psihoaktivnu medikaciju kod starijih osoba treba nakon postizanja remisije pokušati smanjivati i ukidati. Opća preporuka je ostavljanje terapije od 1-2 godine. Svako povlačenje psihofarmakološke terapije zahtijeva strpljivo smanjivanje doze i evaluaciju stanja tijekom nekoliko mjeseci.

elevated eye pressure, anticholinergic effects, hyponatremia, withdrawal symptoms, serotonin syndrome, etc.

Benzodiazepines

Benzodiazepines are also frequently administered at the beginning of treatment. Benzodiazepines should not be used in therapy for a long time. Benzodiazepines should be reduced after 2 weeks and discontinued before the end of 4 to 6 weeks of treatment. Benzodiazepines should be avoided at this age. Specific indications are alcohol withdrawal syndrome, pre-anaesthetic medication, epilepsy, and extremely severe anxiety. Benzodiazepines increase the likelihood of falls, cause confusion, and decrease cognitive abilities. They can also cause paradoxical anxiety and agitation.

In the case of a developed dependence on benzodiazepines, benzodiazepines may be discontinued in certain cases. Tapering from medication is performed by administering replacement benzodiazepine with prolonged activity, which is then slowly reduced over a period of several weeks.

CONCLUSION

All psychoactive medication in the elderly should be reduced and discontinued after reaching remission. The general recommendation is to leave therapy for 1-2 years. Each withdrawal of psychopharmacological therapy requires a patient dosage reduction and evaluation of the mental state over several months.

LITERATURA/*REFERENCES*

1. Forget EL, Roos LL, Deber RB, Walld R. Variations in lifetime healthcare costs across a population. Health Policy 2008; 4: 148-67.
2. United Nations. World Population Ageing 1950–2050: Department of Economic and Social Affairs, Population Division. New York: United Nations Publication; 2007.
3. Chowdhury A, Rasania S. A community based study of psychiatric disorders among the elderly living in delhi. The Internet Journal of Health 2007; 7(1).
4. Sreejith SN, Pooja R, Sreekanth SN. Prevalence of psychiatric disorders among the rural geriatric population: A pilot study in Karnataka, India. Cent Asian J Glob Health 2015; 4(1).
5. Međunarodna klasifikacija bolesti i srodnih zdravstvenih problema, MKB-10. Zagreb: Medicinska naklada, 1994.
6. American Psychiatric Association, The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), 2013.
7. Subramanyam AA, Kedare J, Singh OP, Pinto C. Clinical practice guidelines for geriatric anxiety disorders. Indian J Psychiatry 2018; 60(Suppl 3): S371–82.
8. Segal DL, June A, Payne M, Coolidge FL, Yochim B. Development and initial validation of a self-report assessment tool for anxiety among older adults: The Geriatric Anxiety Scale. J Anxiety Disord 2010; 24: 709-14.
9. Mueller AE, Segal DL, Gavett B, Marty MA. Geriatric Anxiety Scale: item response theory analysis, differential item functioning, and creation of a ten-item short form (GAS-10). Int Psychogeriatr 2015;27(Special Issue 7 - Late Life Anxiety): 1099-111.
10. Noel O, Pifer M, Mahoney C, Segal D. The geriatric anxiety scale and the geriatric anxiety inventory: relationships to anxiety risk factors. InnovAging 2018; 2(1): 283.

Poremećaji spavanja u Alzheimerovoj bolesti – od kliničke slike do neurobioloških nalaza

/ Sleep Disorders in Alzheimer's Disease: from Clinical Presentation to Neurobiological Findings

Mihovil Mladinov

Centar za pamćenje i starost, Institut neuroznanosti Weill, Neurološki odjel, Sveučilište u Kaliforniji, San Francisko, CA, SAD

/ Memory and Aging Center, Weill Institute for Neurosciences, Department of Neurology, University of California, San Francisco, CA, USA

Poremećaji spavanja su učestali rani simptom Alzheimerove bolesti (AB) i vodeći uzrok smanjene kvalitete života bolesnika s AB. S neurobiološke strane poremećaji spavanja su iznimno važni jer omogućuju uvid u rane mehanizme i neurodegenerativne procese specifične za AB. Mnoga istraživanja ukazuju da su poremećaji spavanja u AB uzrokovani selektivnom degeneracijom jezgara koje potiču budnost i spavanje, a koje se nalaze u moždanom deblu i hipotalamusu. Od posebne je važnosti poremećaj sporovalnog spavanja koji dovodi do porasta razine tau proteina i beta amiloida u mozgu, što vjerojatno ima važnu ulogu u patofiziologiji AB. Osmišljavanje prospektivnih istraživanja koja kombiniraju opsežne kliničke podatke s modernim neuropatološkim metodama obećavajući su pristup za bolje razumijevanje biološke podloge poremećaja spavanja i razvoja terapije učinkovite u ranim stadijima AB.

/ Sleep disorders are common early symptoms of Alzheimer's disease (AD) and the leading cause of quality of life impairment in AD patients. In terms of neurobiology, sleep disorders are of exceptional importance as they may provide insight into early mechanisms and neurodegenerative processes specific to AD. Growing data indicate that sleep disruption in AD is caused by selective degeneration of sleep- and wake-promoting nuclei in the brain stem and hypothalamus. Disruption of slow-wave sleep increases the concentration of tau and amyloid-beta in the brain, which may represent an important part of the pathophysiology of AD. Designing prospective studies that combine comprehensive clinical data with modern neuropathological analyses is a promising strategy to elucidate the biological basis of sleep disorders, and open new avenues for early treatments of AD.

ADRESA ZA DOPISIVANJE / *CORRESPONDENCE*:
Mihovil Mladinov, MD, PhD
Memory and Aging Center
Weill Institute for Neurosciences
675 Nelson Rising Lane
San Francisco, CA 94158
Tel.: +1 415-502-7174
E-pošta: mihovil.mladinov@ucsf.edu

KLJUČNE RIJEČI / *KEY WORDS*:
Alzheimerova bolest / *Alzheimer's Disease*
Hipotalamus / *Hypothalamus*
Moždano deblo / *Brain Stem*
NREM / *NREM*
Spavanje / *Sleep*
Sporovalno spavanje / *Slow-wave Sleep*

TO LINK TO THIS ARTICLE: https://doi.org/10.24869/spsih.2019.292

Alzheimerova bolest (AB) se često manifestira neuropsihijatrijskim (NPS) ili nekognitivnim simptomima. Premda su ti simptomi opisani već u prvim izvješćima o AB i bili sastavni dio koncepta ove bolesti (1), istraživanja su tradicionalno bila usmjerena na kognitivne simptome, posebice poremećajima pamćenja, kao i odgovarajućoj patologiji medijalnog sljepoočnog režnja mozga. U posljednjem desetljeću poraslo je zanimanje za razumijevanjem NPS specifičnih za Alzheimerovu bolest, posebice za poremećaje spavanja. Poremećaji spavanja su vodeći uzrok smanjene kvalitete života bolesnika i predstavljaju najveće opterećenje za njegovatelje i obitelj bolesnika (2, 3). Farmakološko liječenje poremećaja spavanja nije vrlo učinkovito i ograničeno je značajnim neželjenim popratnim učincima, poput porasta mortaliteta bolesnika s AB (4, 5). Nefarmakološko liječenje poput bihevioralno-terapijskih pristupa ili unaprjeđenja kvalitete rasvjete pokazuju obećavajuće rezultate, ali ih je teško primijeniti u praksi (6, 7). Da bismo unaprijedili liječenje potrebno je bolje razumijevanje neurobiološke podloge NPS u AB. U tom smjeru sve je vise radova koji pokazuju da se prve patološke promjene u AB javljaju u subkortikalnim regijama mozga, tocnije u moždanom deblu. Nadalje, čini se da patologija moždanog debla predstavlja biološki korelat ranih NPS u AB (8-10). Podatci istraživanja na staničnim kulturama, životinjskim modelima bolesti, kao i rezultati kliničkih istraživanja ukazuju da poremećaji spavanja, posebice poremećaji NREM sporovalnog spavanja igraju važnu ulogu u AD (11). Čini se da su poremećaji spavanja ne samo posljedica neurodegenerativnih promjena, nego i rizični čimbenik ili jedan od uzročnih čimbenika uključenih u patofiziologiju AB. Cilj ovog preglednog rada je sažeto iznijeti kliničku sliku i neurobiološku podlogu poremećaja spavanja u AB. Posebno ću se osvrnuti na rezultate istraživanja postmortalnih uzoraka čovječjeg mozga (moždanog debla i hipotalamusa) te poremećaja NREM spavanja. Poremećaji cirkadijalnog

Neuropsychiatric symptoms (NPS) or non-cognitive symptoms are common manifestations of Alzheimer's disease (AD). Although these symptoms were included in the first reports and early conceptualization of dementia (1), research efforts have traditionally been focused on the cognitive symptoms of AD, such as memory impairment, and the corresponding pathology in the medial temporal lobe. In the last decade, however, there has been a growing interest in understanding AD-specific NPS, particularly sleep disorders. Sleep disorders are leading causes of quality of life impairment in AD patients and place major burdens on these patients' caregivers and families (2,3). To date, the pharmacological treatments available to treat sleep disorders have limited efficacy and carry great risk of serious side effects, including mortality (4, 5), while non-pharmacological, behaviour-cantered treatment options, as well as improvement of light conditions, show promising but limited results and prove difficult to implement (6,7). A better understanding of the neurobiological basis of AD NPS is needed to develop new treatment strategies. There is growing evidence that the first pathological changes in AD arise in the brain's subcortical structures, namely the brain stem. The brain stem also appears to be a neurobiological correlate of early AD NPS (8-10). Furthermore, converging data from experiments involving cell cultures, animal models, and clinical studies show that sleep disorders, especially those affecting non-REM sleep (NREM), play an important, bidirectional role in AD (11). In other words, sleep disorders are not only a secondary consequence of neurodegeneration, but they are likely risk factors for, or even cause, the pathophysiological processes in AD. The goal of this article is to concisely review the clinical presentations and neurobiological basis of sleep disorders in AD. To accomplish this goal, emphasis will be given to experiments that imaged post-mortem brain tissue (specifically from the brainstem and hypothalamic regions) of humans who experienced NREM sleep disturbances. Although of

ritma nisu tema ovog rada, ali će s obzirom na povezanost spavanja i cirkadijalnog ritma biti prigodno spomenuti.

PROMJENE SPAVANJA TIJEKOM STARENJA I ALZHEIMEROVE BOLESTI

Mnoga istraživanja su pokazala da se trajanje i kvaliteta spavanja mijenjaju tijekom normalnog starenja. Na primjer, tijekom života se skraćuje ukupno trajanje spavanja, dok fragmentacija sna, pospanost i broj drijemanja (ili kratkog sna) tijekom dana rastu (12-14). Nadalje, EEG-snimanja pokazuju da se sporovalno, ali i REM spavanje, kao i vretena spavanja sa starenjem skraćuju (15, 16).Zanimljivo je da bolesnici s AB imaju sličan obrazac promjene spavanja, koje su međutim u usporedbi s normalnim starenjem učestalije i izraženije. Podatci epidemioloških istraživanja povezuju poremećaje spavanja s kognitivnim poremećajima i povećanim rizikom za razvoj demencije (17-19). Tako su Moran i sur. pokazali da gotovo četvrtina bolesnika s AB imaju poremećaje spavanja (20). Nadalje, poremećaji spavanja pozitivno koreliraju s trajanjem AB i narušavanjem kvalitete života (21). Tipični poremećaji spavanja koji se javljaju u AB su: produljeno trajanje spavanja, pospanost tijekom dana, učestalije drijemanje tijekom dana, kraće vrijeme usnivanja (latencija sna) tijekom dana, ali dulje vrijeme usnivanja tijekom noći, fragmentacija sna i uranjeno jutarnje buđenje (21-24). U uznapredovalim stadijima AB vrijeme spavanja tijekom dana i noći može čak biti jednakog trajanja. Taj nalaz, kao i sindrom zalazećeg sunca (smetenost i simptomi delirija u večernjim satima) ukazuju na poremećaj cirkadijalnog ritma u bolesnika s AB. Klinički podatci potkrijepljeni su nalazima EEG-a, koji pokazuju poremećaj NREM ili sporovalnog spavanja, kao i smanjenu učestalost vretena spavanja i K-kompleksa u bolesnika s AB (25, 26). Nadalje, poznato je su

key importance for the regulation of the sleep and wake cycling, circadian rhythm sleep disorders will not be the focus of this review, but they will be mentioned when pertinent.

SLEEP CHANGES DURING AGING AND ALZHEIMER'S DISEASE

There is strong evidence that the duration and quality of sleep changes throughout normal aging. For example, over the course of the lifespan, total sleep duration decreases while sleep fragmentation, daytime sleepiness, and number of naps taken per day increases (12-14). Additionally, EEG-recordings show age-related reductions in slow-wave sleep (SWS) and REM sleep, as well as sleep spindle activity (15,16). Interestingly, research on AD patients shows similar, but more frequent and more extensive sleep disruption. Epidemiological data links sleep disorders with cognitive impairment and a heightened risk for dementia (17-19). A study conducted by Moran and colleagues found that 24.5% of AD patients reported sleep disturbances (20). Furthermore, sleep disorders correlate with the duration of AD and impairment of activities of daily living (21). Typical sleep disorders in AD are: sleeping more than usual and sleepiness during the day, increased daytime napping, shorter time to fall asleep (sleep latency) during the day, but longer sleep latency during the night, sleep fragmentation, early morning wakening (21-24). In advanced AD, the sleep time during the night and day can even equal. This finding together with the phenomenon of sundowning in patients with AD is highly indicative for circadian sleep disorders. Clinical data are supported by EEG studies particularly showing impairment of NREM sleep or slow-wave sleep (SWS), as well as reduced sleep spindles and K complexes in patients with AD (25,26). The findings that clinically and electrophysiologically documented sleep disorders are associated with impaired cognition (25,26) and that NREM-sleep plays a ma-

poremećaji spavanja, ustanovljeni na temelju kliničkih i elektrofizioloških pretraga, povezani s kognitivnim poremećajima (25, 26), kao i da NREM-spavanje ima važnu ulogu u konsolidaciji pamćenja (27). Navedeno jasno ukazuje na povezanost između spavanja i demencije.

SPAVANJE UTJEČE NA RAZINU TAU-PROTEINA I BETA-AMILOIDA U MOZGU

Razumijevanje međusobnog utjecaja spavanja i demencije značajno je unaprijeđeno radom Kanga i suradnika (2009). Oni su istraživanjem na mišjem modelu AB pokazali fiziološke fluktuacije razine beta-amiloida u mozgu: razina beta-amiloida opada poslije spavanja, a raste kao posljedica deprivacije sna (28). Upotrebom nove metode mjerenja stope proizvodnje i raščišćavanja (klirensa) proteina u cerebrospinalnom likvoru čovjeka, dokazan je sličan cirkadijalni obrazac razine tau-proteina i beta-amiloida kod zdravih ispitanika (29). Nadalje, pokazalo se da je cirkadijalna promjena razine tih proteina poremećena nakon stvaranja amiloidnih plakova (30). Poremećaji aktivnosti sporovalnog spavanja već nakon nekoliko dana povećavaju razinu tau-proteina u likvoru (31), što je povezano s većim opterećenjem tau-proteinima u mozgu mjerenim tau-PET-om (32). Navedeni nalazi potkrjepljuju epidemiološke podatke da kognitivno asimptomatski pojedinci s patološkom razinom beta-amiloida u mozgu ili likvoru slabije spavaju tijekom noći i imaju veću potrebu za spavanjem tijekom dana (19).

NEURONSKE MREŽE KOJE POTIČU BUDNOST I NREM SPAVANJE

Sustav regulacije spavanja i budnosti je složen, uključuje brojne neurotransmitorske sustave koji utječu jedni na druge, a potječu iz možda-

jor role in memory consolidation (27) represent an important link between sleep and dementia.

SLEEP INFLUENCES BRAIN LEVELS OF TAU AND AMYLOID-BETA

Our understanding of the association between sleep and dementia has been expanded through the seminal work of Kang et al. (2009), who used AD mutant mice to show a physiological diurnal fluctuation of amyloid-beta (Aβ): Aβ levels decrease in the brain after sleep and increase during sleep deprivation (28). A new method used to quantify protein production and clearance rate in cerebrospinal fluid (CSF) reported similar rapid Aβ turnover in healthy human participants (29). Recent research on human subjects showed that circadian fluctuation of Aβ and tau in CSF is disrupted after brain plaque formation (30). Furthermore, disruption of NREM slow-wave activity increases CSF tau levels over several days (31) and is associated with higher cortical tau-burden as measured by tau-PET (32). These findings corroborate the epidemiological data reporting that cognitively asymptomatic individuals with amyloid deposition, as assessed by Aβ42 levels in CSF, have decreased sleep efficiency and more frequent napping compared to those without amyloid deposition (19)

NETWORKS PROMOTING WAKEFULNESS AND NON-REM SLEEP

The neural system regulating sleep and wake states is complex and involves mutually interacting neurotransmitter systems arising from the brain stem and hypothalamus. In 2001 Saper and colleagues formulated a widely accepted concept of switching activity in sleep- and wake-promoting networks (33). According to

nog debla i hipotalamusa. Saperi sur.su 2001. objasnili promjene iz stanja budnosti u spavanje i obrnuto sistemom sklopke (33). Prema toj hipotezi, međudjelovanje između centara u mozgu koji potiču spavanje i onih koji potiču budnost ubrzava prijelaz između navedenih stanja. Na primjer, neuroni koji potiču spavanje, svojom aktivnošću istovremeno inhibiraju aktivnost neurona koji potiču budnost. Utišavanje sustava budnosti pridonosi dezinhibiciji neurona koji potiču spavanje čime se postiže brz i stabilan prijelaz u stanje spavanja.

Glavne jezgre koje potiču budnost nalaze se u moždanom deblu, hipotalamusu i bazi velikog mozga. U moždanom deblu budnost potiču noradrenergički neuroni u lokusu ceruleusu (LC) (34, 35), dopaminergički neuroni u ventralnoj tegmentalnoj areji (VTA) (36, 37) i serotonergički neuroni u dorzalnim jezgrama raphe (DRN) (38, 39). Navedene jezgre imaju opsežne projekcije u moždanu koru, talamus, hipotalamus i bazu mozga. U ponsu, glavne jezgre za budnost su glutamatergička parabrahijalna jezgra (PB) i preceruleus (PC) (40, 41). Kolinergičke jezgre aktivne tijekom budnosti uključuju pedunkulopontine (PPT) i laterodorzalne tegmentalne jezgre (LDT) (40, 41). Oreksinergički neuroni, smješteni u stražnjem dijelu lateralne areje hipotalamusa (LHA) su od posebne važnosti za stanje budnosti. Ti se neuroni projiciraju u moždano deblo, hipotalamus i LC (42). U blizini LHA nalazi se tuberomamilarna jezgra (TMN), koja obiluje histaminergičkim neuronima (43). Ostale kolinergičke, ali i GABAergičke i glutamatergičke skupine neurona aktivne tijekom budnosti nalaze se u bazi mozga (44).

Jezgre talamusa same po sebi ne potiču stanje budnosti, nego sudjeluju kao relejne jezgre primajući projekcije iz gore navedenih dijelova moždanog debla i hipotalamusa. Jezgre talamusa opsežno opskrbljuju moždanu koru glutamatergičkom inervacijom (45).

Najbitniji dijelovi sustava koji promiče spavanje su neuroni koji sadrže galanin i GABA-u, a

the sleep switch hypothesis, there is a reciprocal interaction between sleep- and wake-promoting brain regions. For example, when sleep-promoting neurons fire rapidly during sleep, they simultaneously inhibit the wake-promoting neurons. The silencing of the arousal system also contributes to the disinhibition of the sleep nuclei, which ensures a relatively rapid and stable switch into the sleep state.

The main wake-promoting nuclei are located in the brain stem, hypothalamus, and basal forebrain. The wake-promoting nuclei in the brain stem include the noradrenergic neurons of the locus coeruleus (LC) (34,35), the dopaminergic neurons of the ventral tegmental area (VTA) (36,37), and the serotoninergic dorsal raphe nuclei (DRN) (38,39). These nuclei project abundantly to the cerebral cortex, thalamus, hypothalamus and basal forebrain. The pontine glutamatergic parabrachial nucleus (PB) and precoeruleus (PC) area are two other wake-promoting nuclei in the brain stem (40,41). The cholinergic brain stem nuclei, which are also active during wakefulness, include the pedunculopontine (PPT) and laterodorsal tegmental nuclei (LDT) (40,41). The orexinergic neurons, located in the posterior part of the lateral hypothalamic area (LHA), are of particular importance during wakefulness. These neurons project to the brain stem, hypothalamus and LC (42). Anatomically close to the LHA is the tuberomammillary nucleus (TMN), which is abundant with histaminergic neurons (43). Other cholinergic, but also GABAergic and glutamatergic neuronal groups active during wakefulness can be found in the basal forebrain (44).

Although the thalamic nuclei do not have an intrinsic wake-promoting function, they are involved in wakefulness as relay nuclei that receive innervation from brain stem and hypothalamic structures and, in turn, provide extensive glutamatergic innervation of the cerebral cortex (45).

Major parts of the NREM sleep-promoting networks are neurons containing galanin and

koji se nalaze u intermedijanoj (ImN) ili ventrolateralnoj preoptičkoj jezgri (VLPO) hipotalamusa (46-48). Ti se neuroni projiciraju u TMN, LC, DNR, periakveduktalnu sivu tvar (PAG), PB i LHA. Druga bitna regija preoptičkog hipotalamusa je medijana preoptička jezgra (MnPO), koja sadrži GABAergičke neurone (49, 50). MnPO opsežno inervira VLPO, LHA, LC, DRN i PAG. Nedavna istraživanja provedena na glodavcima pokazala su da GABAergički neuroni parafacijalne zone (PZ) u produljenoj moždini potiču sporovalnu moždanu aktivnost. Oni se projiciraju u PB jezgru koja posljedično šalje glutamatergičku inervaciju u bazu mozga (51).

NEUROPATOLOŠKI NALAZI U MONOAMINERGIČKIM JEZGRAMA MOŽDANOG DEBLA

Degeneracija noradrenergičkog lokusa ceruleusa u AD je dobro poznata (52-54). Opsežnom postmortalnom analizom 2322 čovječja mozga, Braak i suradnici su 2011. pokazali da se prve patološke promjene tau-proteina u mozgu vide u jezgrama moždanog debla, najčešće u LC (55). Sto se tiče zahvaćanja moždane kore, prvi patološki proces očekivano je vidljiv u transentorinalnom korteksu. Zanimljivo je da je bez iznimke svaki mozak s patološkim nalazom u transentorinalnom korteksu imao zahvaćeni LC. Detaljno istraživanje LC pokazuje da je 8 % neurona tau-pozitivno već u Braakovom stadiju 0 (56). S napredovanjem bolesti, volumen LC-a se smanjuje, ali broj tau-pozitivnih neurona ostaje stabilan (56, 57). Prvo sustavno istraživanje serotonergičkih rafe jezgara (DRN) u AB pokazalo je iznimnu količinu neurofibrilarnih snopovai 75 % smanjenje broja neurona (58, 59). DRN je najosjetljivija serotonergička jezgra u AB (60), koja je zahvaćena u ranom stadiju bolesti, čak i prije nego je transentorinalni korteks zahvaćen (56,60,61).

GABA, localized in the intermediate nucleus (ImN) or ventrolateral preoptic nucleus (VLPO) of the hypothalamus (46-48). These neurons project to TMN, LC, raphe nuclei, periaqueductal gray (PAG), PB, and LHA. Another hypothalamic region in the preoptic area is the median preoptic nucleus (MnPO), which contains GABAergic neurons (49,50). The MnPO projects vastly to VLPO, LHA, LC, DRN, and PAG. Recent work done in rodents shows that the GABAergic neurons of the medullary parafacial zone (PZ) promote slow-wave activity projecting to the PB nucleus which, in turn, provides glutamatergic innervation of the basal forebrain (51).

NEUROPATHOLOGICAL FINDINGS IN THE MONOAMINERGIC BRAINSTEM NUCLEI

Degeneration of the noradrenergic locus coeruleus in AD is well documented (52-54). In a comprehensive post-mortem brain analysis of 2322 subjects, Braak et al. 2011 report that the first pretangle tau pathology in the brain is seen in brain stem nuclei, most often the LC (55). In the cortex, the region affected in this pretangle stage is the transentorhinal cortex. Interestingly, transentorhinal cortex tau-pathology is always accompanied by brain stem involvement, providing strong evidence that the LC is the first brain region affected by tau pathology. A detailed examination of the LC demonstrates that around 8% of LC neurons are already tau-positive in Braak stage 0 (56). As the disease progresses, there is a reduction of LC volume, but the number of tau-positive LC neurons remains stable (56,57). The first systematic analysis of serotonergic dorsal raphe nuclei (DRN) in AD shows extraordinary burden of neurofibrillary tangles and around a 75% reduction of neurons (58,59). Further studies demonstrate that the DRN is the most vulnerable serotonergic nucleus in AD (60) and is affected in the early course of AD, even before the transentorhinal cortex (56,60,61).

NEUROPATOLOŠKI NALAZI U HIPOTALAMUSU

U hipotalamusu je, kao i u moždanom deblu, opisana opsežna ali selektivna degeneracija jezgara. Dok tijekom starenja dolazi do diskretnog smanjenja volumena i broja neurona u suprahijazmatičkoj jezgri (SCN), te su promjene u AB veoma opsežne (62).Golgijevom metodom obilježavanja neurona te elektronskom mikroskopijom SCN-a, supraoptičke jezgre (SON) i periventrikularne jezgre (PVN) otkriveno je značajno smanjenje broja neurona i dendritičkih ogranaka u postmortalnom tkivu bolesnika s Braakovim stadijem II/III Alzheimerove bolesti u odnosu na kontrolne uzorke (63). Čini se da je SCN značajnije pogođena od SON i PVN. S obzirom da SCN predstavlja središnji cirkadijalni sat organizma, ovaj nalaz predstavlja neuropatološki korelat ranog poremećaja ciklusa spavanja i budnosti u AB. Drugo istraživanje u kojem su korištene gore navedene metode pokazalo je smanjenje broja neurona i dendrita, kao i propadanje sinapsi u mamilarnim jezgrama bolesnika s ranim stadijem AB. Zanimljivo je da je pritom opisana mala količina neurofibrilarne patologije. Histaminergičke tuberomamilarne jezgre su opsežno istražene u AB. U ranim stadijima bolesti postoji značajan gubitak neurona i dendrita, kao i propadanja sinapsi tog područja. U kasnijim stadijima povećava se količina patoloških tau-proteina te se dodatno smanjuje broj neurona (64-66). Oh i sur. nedavno su pokazali izraženo propadanje oreksinergičkih i histaminergičkih neurona u AB, uključenih u održavanje budnosti. Broj neurona u LHA bio je manji za 75 %, dok je broj neurona u TMN bio manji za 60 %. Osim toga, dokazali su značajnu opterećenost navedenih regija neurofibrilarnom patologijom, kao i smanjenje broja neurona koji proizvode navedene neurotransmitore. Manje su poznate moguće promjene hipotalamičkih jezgara aktivnih tijekom spavanja. Postoje oprečni i neujednačeni nalazi

NEUROPATHOLOGICAL FINDINGS IN THE HYPOTHALAMUS

As in the brain stem, a profound but selective degeneration of hypothalamic nuclei has been reported. Research shows decreased volume and total cell counts in the suprachiasmatic nucleus (SCN) in senescence, and a dramatic reduction in AD (62). A Golgi and electron microscope study of SCN, supraoptic (SON), and paraventricular nucleus (PVN) reveals a substantial decrease in the neuronal population and a loss of dendritic branches in subjects with AD Braak stage II/III compared to controls (63). The SCN appears to be more severely affected than SON and PVN. Since the SCN constitutes the primary circadian clock in human, this finding likely represents a pathological correlate of early disruption of the sleep-wake cycle in AD. Another study using a Golgi and electron microscope demonstrated a significant loss of neurons and dendrites, as well as synaptic alterations in the mammillary bodies of patients with early stages of AD. Interestingly, minimal neurofibrillary pathology was reported. The histaminergic tuberomammillary area has been extensively studied in AD. In early AD stages, there is a significant loss of neurons and dendrites, as well as alterations to synapses in this area. Later AD stages exhibit tau-burden and a reduction of neurons (64-66). A study conducted by Oh and colleagues (2019) demonstrates extensive degeneration of orexinergic and histaminergic wake promoting nuclei in AD, with a 75% reduction of neurons in LHA containing orexin neurons, and a 60% neuronal loss in TMN. Significant tau-pathology and a reduction in the number of neurotransmitter-producing neurons is also detected. Less is known regarding sleep-promoting regions of the hypothalamus. Alterations in galanin-cell morphology and axonal varicosities is also reported with conflicting or inconsistent data regarding the number of galanin-cells in in SON, PV, and TM (67). A

što se tiče morfologije galaninergičkih neurona kao i njihovih aksona u SON, PV I TMN (67). Jedno istraživanje upućuje da je gubitak galaninergičkih neurona u ImN neuropatološki korelat fragmentacije sna u bolesnika s AB (68).

ZAKLJUČCI I SMJER BUDUĆIH ISTRAŽIVANJA

U posljednjem desetljeću svjedočimo iznimnom porastu znanja i razvoju novih znanstvenih metoda u temeljnim i kliničkim istraživanjima poremećaja spavanja u kontekstu neurodegenerativnih bolesti. Pokusi na mišjim modelima AB i novi eksperimentalni pristupi doveli su do uzbudljivih otkrića uloge spavanja u metabolizmu tau proteina u beta amiloida. To nam je omogućilo bolje razumijevanje patofiziologije spavanja u AB. Međutim, rezultate temeljnih, kliničkih i neuropatoloških istraživanja nije lako integrirati. Neuralni mehanizmi budnosti i spavanja su vrlo složeni, a većina podataka o fiziologiji sna i njegovim poremećajima potječe od istraživanja na životinjskim modelima. Čini se da je obećavajući pristup istraživanja tog područja unaprjeđenje metoda slikovnih prikaza mozga, kao i osmišljavanje prospektivnih studija koje kombiniraju opsežne kliničke podatke s modernim neuropatološkim metodama. Nove spoznaje o poremećajima jezgara koje potiču spavanja i budnost, kao i njihovih neurotransmitorskih sustava omogućit ce otkrivanje novih terapijskih ciljeva i osmišljavanje učinkovitih lijekova. U sirem smislu, ono sto smo naučili je da temeljite kliničko-patološke korelacije, uključujući opsežni neuropatološki nalaz mijenjaju smjer istraživanja u AB. Ako prve promjene u AB počinju u moždanom deblu, na što ukazuju trenutna istraživanja, onda je to regija koja bi trebala biti cilj istraživanja u potrazi za ranim patofiziološkim promjenama i ranim terapijskim intervencijama u AB.

recent study by Lim and colleagues (2014) correlates clinical sleep data with post-mortem finding and demonstrates that the loss of galaninergic neurons of the ImN is associated with sleep fragmentation (68).

CONCLUSIONS AND FUTURE DIRECTIONS

With growing knowledge and developments in basic and clinical sleep, research in the context of neurodegenerative disorders is proliferating like never before. Experiments using AD mouse models and novel experimental approaches in basic research have provided exciting new knowledge about the role of sleep in tau and amyloid metabolism and have given us a better understanding of the pathophysiology of sleep in AD. However, it is not easy to bring together experimental data from basic, clinical and neuropathological research. The neural mechanisms of arousal and sleep are extremely complex, with the majority of data on sleep physiology, and its disruption in AD comes from animal research. It seems that the improvement of imaging methods and the designing prospective studies, which can combine comprehensive clinical data with modern neuropathological analyses, are promising strategies that can be used to overcome this gap. Gaining more knowledge on the disruption of specific sleep- and wake-promoting nuclei and their neurotransmitter systems will provide us with targets for more effective drug development. Broadly speaking, what we have learned is that thorough clinico-pathological correlation, including comprehensive neuropathological examination, is changing the direction of Alzheimer research. If the first AD pathological changes arise in the brain stem, as current data suggest, then this is the region that should be investigated when researching early pathophysiological processes and therapeutic intervention in AD.

LITERATURA/*REFERENCES*:

1. Alzheimer A. Über einen eigenartigen schweren Erkrankungsprozeß der Hirnrinde. Neurologisches Centralblatt 1906;23:1129-36.
2. Spira AP, Chen-Edinboro LP, Wu MN, Yaffe K. Impact of sleep on the risk of cognitive decline and dementia. Curr Opin Psychiatry. 2014;27(6):478-83.
3. Spira AP, Kaufmann CN, Kasper JD, Ohayon MM, Rebok GW, Skidmore E, et al. Association between insomnia symptoms and functional status in U.S. older adults. J Gerontol B Psychol Sci Soc Sci. 2014;69 Suppl 1:S35-41.
4. Dauphinot V, Faure R, Omrani S, Goutelle S, Bourguignon L, Krolak-Salmon P, et al. Exposure to anticholinergic and sedative drugs, risk of falls, and mortality: an elderly inpatient, multicenter cohort. J Clin Psychopharmacol. 2014;34(5):565-70.
5. Weich S, Pearce HL, Croft P, Singh S, Crome I, Bashford J, *et al*. Effect of anxiolytic and hypnotic drug prescriptions on mortality hazards: retrospective cohort study. Bmj. 2014;348:g1996.
6. Figueiro MG, Lesniak NZ, Rea MS. Implications of controlled short-wavelength light exposure for sleep in older adults. BMC Res Notes. 2011;4:334.
7. Riemersma-van der Lek RF, Swaab DF, Twisk J, Hol EM, Hoogendijk WJ, Van Someren EJ. Effect of bright light and melatonin on cognitive and noncognitive function in elderly residents of group care facilities: a randomized controlled trial. JAMA. 2008;299(22):2642-55.
8. Ehrenberg AJ, Suemoto CK, Franca Resende EP, Petersen C, Leite REP, Rodriguez RD, et al. Neuropathologic Correlates of Psychiatric Symptoms in Alzheimer's Disease. J Alzheimers Dis. 2018;66(1):115-26.
9. Grinberg LT, Rueb U, Heinsen H. Brainstem: neglected locus in neurodegenerative diseases. Front Neurol. 2011;2:42.
10. Simic G, Stanic G, Mladinov M, Jovanov-Milosevic N, Kostovic I, Hof PR. Does Alzheimer's disease begin in the brainstem? Neuropathol Appl Neurobiol. 2009;35(6):532-54.
11. Lucey BP, Holtzman DM. How amyloid, sleep and memory connect. Nat Neurosci. 2015;18(7):933-4.
12. Conte F, Arzilli C, Errico BM, Giganti F, Iovino D, Ficca G. Sleep measures expressing 'functional uncertainty' in elderlies' sleep. Gerontology. 2014;60(5):448-57.
13. Klerman EB, Dijk DJ. Age-related reduction in the maximal capacity for sleep--implications for insomnia. Curr Biol. 2008;18(15):1118-23.
14. Porter VR, Buxton WG, Avidan AY. Sleep, Cognition and Dementia. Curr Psychiatry Rep. 2015;17(12):97.
15. Landolt HP, Dijk DJ, Achermann P, Borbely AA. Effect of age on the sleep EEG: slow-wave activity and spindle frequency activity in young and middle-aged men. Brain Res. 1996;738(2):205-12.
16. Lombardo P, Formicola G, Gori S, Gneri C, Massetani R, Murri L, *et al*. Slow wave sleep (SWS) distribution across night sleep episode in the elderly. Aging (Milano). 1998;10(6):445-8.
17. Leng Y, Redline S, Stone KL, Ancoli-Israel S, Yaffe K. Objective napping, cognitive decline, and risk of cognitive impairment in older men. Alzheimers Dement. 2019;15(8):1039-47.
18. Spira AP, Stone KL, Redline S, Ensrud KE, Ancoli-Israel S, Cauley JA, *et al*. Actigraphic Sleep Duration and Fragmentation in Older Women: Associations With Performance Across Cognitive Domains. Sleep. 2017;40(8).
19. Ju YE, McLeland JS, Toedebusch CD, Xiong C, Fagan AM, Duntley SP, *et al*. Sleep quality and preclinical Alzheimer disease. JAMA Neurol. 2013;70(5):587-93.
20. Moran M, Lynch CA, Walsh C, Coen R, Coakley D, Lawlor BA. Sleep disturbance in mild to moderate Alzheimer's disease. Sleep Med. 2005;6(4):347-52.
21. Tractenberg RE, Singer CM, Kaye JA. Characterizing sleep problems in persons with Alzheimer's disease and normal elderly. J Sleep Res. 2006;15(1):97-103.
22. Shin HY, Han HJ, Shin DJ, Park HM, Lee YB, Park KH. Sleep problems associated with behavioral and psychological symptoms as well as cognitive functions in Alzheimer's disease. J Clin Neurol. 2014;10(3):203-9.
23. Carpenter BD, Strauss M, Patterson MB. Sleep Disturbances in Community-Dwelling Patients with Alzheimer's Disease. Clinical Gerontologist. 1996;16(2):35-49.
24. McCurry SM, Logsdon RG, Teri L, Gibbons LE, Kukull WA, Bowen JD, *et al*. Characteristics of sleep disturbance in community-dwelling Alzheimer's disease patients. J Geriatr Psychiatry Neurol. 1999;12(2):53-9.
25. Tworoger SS, Lee S, Schernhammer ES, Grodstein F. The association of self-reported sleep duration, difficulty sleeping, and snoring with cognitive function in older women. Alzheimer Dis Assoc Disord. 2006;20(1):41-8.
26. Moe KE, Vitiello MV, Larsen LH, Prinz PN. Symposium: Cognitive processes and sleep disturbances: Sleep/wake patterns in Alzheimer's disease: relationships with cognition and function. J Sleep Res. 1995;4(1):15-20.
27. Diekelmann S, Born J. The memory function of sleep. Nat Rev Neurosci. 2010;11(2):114-26.
28. Kang JE, Lim MM, Bateman RJ, Lee JJ, Smyth LP, Cirrito JR, *et al*. Amyloid-beta dynamics are regulated by orexin and the sleep-wake cycle. Science. 2009;326(5955):1005-7.
29. Bateman RJ, Munsell LY, Morris JC, Swarm R, Yarasheski KE, Holtzman DM. Human amyloid-beta synthesis and clearance rates as measured in cerebrospinal fluid in vivo. Nat Med. 2006;12(7):856-61.
30. Roh JH, Huang Y, Bero AW, Kasten T, Stewart FR, Bateman RJ, *et al*. Disruption of the sleep-wake cycle and diurnal fluctuation of beta-amyloid in mice with Alzheimer's disease pathology. Sci Transl Med. 2012;4(150):150ra22.
31. Ju YE, Lucey BP, Holtzman DM. Sleep and Alzheimer disease pathology--a bidirectional relationship. Nat Rev Neurol. 2014;10(2):115-9.

32. Lucey BP, McCullough A, Landsness EC, Toedebusch CD, McLeland JS, Zaza AM, et al. Reduced non-rapid eye movement sleep is associated with tau pathology in early Alzheimer's disease. Sci Transl Med. 2019;11(474).
33. Saper CB, Chou TC, Scammell TE. The sleep switch: hypothalamic control of sleep and wakefulness. Trends Neurosci. 2001;24(12):726-31.
34. Harley CW. A role for norepinephrine in arousal, emotion and learning?: limbic modulation by norepinephrine and the Kety hypothesis. Prog Neuropsychopharmacol Biol Psychiatry. 1987;11(4):419-58.
35. Szabadi E. Functional neuroanatomy of the central noradrenergic system. J Psychopharmacol. 2013;27(8):659-93.
36. Dahlstroem A, Fuxe K. Evidence for the existence of monoamine-containing neurons in the central nervous system I. Demonstration of monoamines in the cell bodies of brain stem neurons. Acta Physiol Scand Suppl. 1964:Suppl 232:1-55.
37. Dahlstrom A, Fuxe K. Localization of monoamines in the lower brain stem. Experientia. 1964;20(7):398-9.
38. Baker KG, Halliday GM, Tork I. Cytoarchitecture of the human dorsal raphe nucleus. J Comp Neurol. 1990;301(2):147-61.
39. Baker KG, Halliday GM, Halasz P, Hornung JP, Geffen LB, Cotton RG, *et al*. Cytoarchitecture of serotonin-synthesizing neurons in the pontine tegmentum of the human brain. Synapse. 1991;7(4):301-20.
40. Steriade M, Datta S, Pare D, Oakson G, Curro Dossi RC. Neuronal activities in brain-stem cholinergic nuclei related to tonic activation processes in thalamocortical systems. J Neurosci. 1990;10(8):2541-59.
41. el Mansari M, Sakai K, Jouvet M. Unitary characteristics of presumptive cholinergic tegmental neurons during the sleep-waking cycle in freely moving cats. Exp Brain Res. 1989;76(3):519-29.
42. Peyron C, Tighe DK, van den Pol AN, de Lecea L, Heller HC, Sutcliffe JG, *et al*. Neurons containing hypocretin (orexin) project to multiple neuronal systems. J Neurosci. 1998;18(23):9996-10015.
43. Panula P, Airaksinen MS, Pirvola U, Kotilainen E. A histamine-containing neuronal system in human brain. Neuroscience. 1990;34(1):127-32.
44. Jones BE. Activity, modulation and role of basal forebrain cholinergic neurons innervating the cerebral cortex. Prog Brain Res. 2004;145:157-69.
45. Jones EG, Leavitt RY. Retrograde axonal transport and the demonstration of non-specific projections to the cerebral cortex and striatum from thalamic intralaminar nuclei in the rat, cat and monkey. J Comp Neurol. 1974;154(4):349-77.
46. Bonnefond C, Palacios JM, Probst A, Mengod G. Distribution of Galanin mRNA Containing Cells and Galanin Receptor Binding Sites in Human and Rat Hypothalamus. Eur J Neurosci. 1990;2(7):629-37.
47. Garcia-Falgueras A, Ligtenberg L, Kruijver FP, Swaab DF. Galanin neurons in the intermediate nucleus (InM) of the human hypothalamus in relation to sex, age, and gender identity. J Comp Neurol. 2011;519(15):3061-84.
48. Gaus SE, Strecker RE, Tate BA, Parker RA, Saper CB. Ventrolateral preoptic nucleus contains sleep-active, galaninergic neurons in multiple mammalian species. Neuroscience. 2002;115(1):285-94.
49. Suntsova N, Szymusiak R, Alam MN, Guzman-Marin R, McGinty D. Sleep-waking discharge patterns of median preoptic nucleus neurons in rats. J Physiol. 2002;543(Pt 2):665-77.
50. Gong H, McGinty D, Guzman-Marin R, Chew KT, Stewart D, Szymusiak R. Activation of c-fos in GABAergic neurones in the preoptic area during sleep and in response to sleep deprivation. J Physiol. 2004;556(Pt 3):935-46.
51. Anaclet C, Ferrari L, Arrigoni E, Bass CE, Saper CB, Lu J, *et al*. The GABAergic parafacial zone is a medullary slow wave sleep-promoting center. Nat Neurosci. 2014;17(9):1217-24.
52. Bondareff W, Mountjoy CQ, Roth M. Loss of neurons of origin of the adrenergic projection to cerebral cortex (nucleus locus ceruleus) in senile dementia. Neurology. 1982;32(2):164-8.
53. Iversen LL, Rossor MN, Reynolds GP, Hills R, Roth M, Mountjoy CQ, *et al*. Loss of pigmented dopamine-beta-hydroxylase positive cells from locus coeruleus in senile dementia of Alzheimer's type. Neurosci Lett. 1983;39(1):95-100.
54. Busch C, Bohl J, Ohm TG. Spatial, temporal and numeric analysis of Alzheimer changes in the nucleus coeruleus. Neurobiol Aging. 1997;18(4):401-6.
55. Braak H, Thal DR, Ghebremedhin E, Del Tredici K. Stages of the pathologic process in Alzheimer disease: age categories from 1 to 100 years. J Neuropathol Exp Neurol. 2011;70(11):960-9.
56. Ehrenberg AJ, Nguy AK, Theofilas P, Dunlop S, Suemoto CK, Di Lorenzo Alho AT, *et al*. Quantifying the accretion of hyperphosphorylated tau in the locus coeruleus and dorsal raphe nucleus: the pathological building blocks of early Alzheimer's disease. Neuropathol Appl Neurobiol. 2017;43(5):393-408.
57. Theofilas P, Ehrenberg AJ, Dunlop S, Di Lorenzo Alho AT, Nguy A, Leite REP, *et al*. Locus coeruleus volume and cell population changes during Alzheimer's disease progression: A stereological study in human postmortem brains with potential implication for early-stage biomarker discovery. Alzheimers Dement. 2017;13(3):236-46.
58. Curcio CA, Kemper T. Nucleus raphe dorsalis in dementia of the Alzheimer type: neurofibrillary changes and neuronal packing density. J Neuropathol Exp Neurol. 1984;43(4):359-68.
59. Yamamoto T, Hirano A. Nucleus raphe dorsalis in Alzheimer's disease: neurofibrillary tangles and loss of large neurons. Ann Neurol. 1985;17(6):573-7.
60. Rub U, Del Tredici K, Schultz C, Thal DR, Braak E, Braak H. The evolution of Alzheimer's disease-related cytoskeletal pathology in the human raphe nuclei. Neuropathol Appl Neurobiol. 2000;26(6):553-67.
61. Grinberg LT, Rub U, Ferretti RE, Nitrini R, Farfel JM, Polichiso L, *et al*. The dorsal raphe nucleus shows phospho-tau neurofibrillary changes before the transentorhinal region in Alzheimer's disease. A precocious onset? Neuropathol Appl Neurobiol. 2009;35(4):406-16.

62. Goudsmit E, Hofman MA, Fliers E, Swaab DF. The supraoptic and paraventricular nuclei of the human hypothalamus in relation to sex, age and Alzheimer's disease. Neurobiol Aging. 1990;11(5):529-36.
63. Baloyannis SJ, Mavroudis I, Mitilineos D, Baloyannis IS, Costa VG. The hypothalamus in Alzheimer's disease: a Golgi and electron microscope study. Am J Alzheimers Dis Other Demen. 2015;30(5):478-87.
64. Baloyannis SJ, Mavroudis I, Baloyannis IS, Costa VG. Mammillary Bodies in Alzheimer's Disease: A Golgi and Electron Microscope Study. Am J Alzheimers Dis Other Demen. 2016;31(3):247-56.
65. Airaksinen MS, Paetau A, Paljarvi L, Reinikainen K, Riekkinen P, Suomalainen R, et al. Histamine neurons in human hypothalamus: anatomy in normal and Alzheimer diseased brains. Neuroscience. 1991;44(2):465-81.
66. Shan L, Bossers K, Unmehopa U, Bao AM, Swaab DF. Alterations in the histaminergic system in Alzheimer's disease: a postmortem study. Neurobiol Aging. 2012;33(11):2585-98.
67. Chan-Palay VL, Jentsch B. Galanin tuberomammillary neurons in the hypothalamus in Alzheimer's and Parkinson's diseases. Prog Brain Res. 1992;93:263-70.
68. Lim AS, Ellison BA, Wang JL, Yu L, Schneider JA, Buchman AS, et al. Sleep is related to neuron numbers in the ventrolateral preoptic/intermediate nucleus in older adults with and without Alzheimer's disease. Brain. 2014;137(Pt 10):2847-61.

Neurokognitivni poremećaji – kako možemo smanjiti rizik

/ Neurocognitive Disorders – How Can We Reduce the Risk

Suzana Uzun[1,2], Oliver Kozumplik[1,2], Dubravka Kalinić[3], Ivan Požgain[2], Ninoslav Mimica[1,3]

[1]Klinika za psihijatriju Vrapče, Zagreb, [2]Sveučilište Josipa Jurja Strossmayera, Medicinski fakultet, Osijek, [3]Sveučilište u Zagrebu, Medicinski fakultet, Zagreb, Hrvatska

/ [1]*University Psychiatric Hospital Vrapče, Zagreb,* [2]*Josip Juraj Strossmayer University, School of Medicine, Osijek,* [3]*University in Zagreb, School of Medicine, Zagreb, Croatia*

Demencija spada u bolesti s najvećom prevalencijom poslije kardiovaskularnih, cerebrovaskularnih bolesti te malignih bolesti. Smatra se da u svijetu ima oko 50 milijuna osoba s demencijom, a procjenjuje se da će ih 2050. godine biti čak 115 milijuna. U smanjenju razvoja demencije, kada je riječ o osobama treće dobi, od ključnog je značenja nastavak njihove mentalne aktivnosti (tzv. mentalni fitnes). Vrlo je korisno kada se (stariji) ljudi redovito bave nekim društvenim igrama, različitim mozgalicama, križaljkama, sudokuom, rebusima i slično, jer sve to služi i kao svojevrstan kognitivni trening.

/ Dementia is one of diseases with highest prevalence after cardiovascular and cerebrovacular diseases, and malignant diseases. There are an estimated 50 million people with dementia in the world, with an estimated 2050 year to be as much as 115 million. In reducing the development of dementia, when it comes to older people, it is crucial meanings the continuation of their mental activity (so-called mental fitness). It is very useful when (older) people get on a regular basis engage in some board games, different puzzles, crossword puzzles, sudoku, rebuses and the like, because it all serves as a kind of cognitive training.

ADRESA ZA DOPISIVANJE / *CORRESPONDENCE*:
Doc. dr. sc. prim. Suzana Uzun, dr. med.
Klinika za psihijatriju Vrapče
Bolnička cesta 32
10 090 Zagreb, Hrvatska
Tel: +385 1 3780 682
E-pošta: suzana.uzun@bolnica-vrapce.hr

KLJUČNE RIJEČI / *KEY WORDS*:
Aktivnost / *Activity*
Alzheimerova bolest / *Alzheimer's Disease*
Demencija / *Dementia*
Prehrana / *Nutrition*
Smanjenje rizika / *Risk Reducing*

TO LINK TO THIS ARTICLE: https://doi.org/10.24869/spsih.2019.303

Demencija spada u bolesti s najvećom prevalencijom poslije kardiovaskularnih, cerebrovaskularnih bolesti te malignih bolesti. Smatra se da u svijetu ima oko 50 milijuna osoba s demencijom, a procjenjuje se da će ih 2050. godine biti čak 115 milijuna (1).

Alzheimerova bolest (AB) najčešći je uzrok demencije. S obzirom na to da je AB još uvijek neizlječiv, mnogo se pozornosti obraća identifikaciji rizičnih čimbenika u nastanku demencije (2). Postoji više rizika na koje se može bitno utjecati. Uočeno je da osobe koje su imale težu ozljedu glave, poglavito ako su pritom ostale i bez svijesti, češće razviju AB. Nedavna studija potvrdila je da oboljeli od dijabetesa (posebno tipa 2), a stariji su od 60 godina, dvostruko češće obolijevaju od te bolesti. Smatra se da 80 % osoba s AB-om boluje i od kardiovaskularnih bolesti, a visoki kolesterol smatra se rizičnim faktorom. Visok krvni tlak također pogoduje nastanku AB-a, ali kao i svi drugi rizici za nastanak srčanih bolesti. Prototip zdrave prehrane je mediteranska hrana (riba, maslinovo ulje, cjelovite žitarice, crveno i ljubičasto voće i povrće, orašasti plodovi) (3). Demencije su sindrom u sklopu raznih skupina organskih bolesti centralnog nervnog sistema, najčešće neurodegenerativnih, u okviru kojih dolazi do stečenog progresivnog oštećenja kognitivnih funkcija, udruženih s promjenama ličnosti dovoljnog stupnja da utječu na socijalno ponašanje i profesionalnu aktivnost (4,5). Prevalencija demencija postaje značajna u osoba starijih od 60 godina kada se udvostruči svakih pet godina života. Incidencija demencija iznosi 5,4 - 9,4 % godišnje, a u populaciji osoba starijih od 85 godina čak 30-35 % (6). Naziv demencija potječe od latinskog *dementia* što doslovno znači „bezumnost, ludilo". Prvi ga je upotrijebio Celsus (10 g. n. e), ali u kontekstu druge bolesti – prema opisu kliničke slike riječ je o maniji. I pored duge povijesti poznavanja problema kognitivnog propadanja u starijih osoba, tek je početkom prošlog stoljeća ono povezano sa

Dementia is one of the diseases with the highest prevalence after cardiovascular and cerebrovascular diseases and malignant diseases. It is believed that there are about 50 million persons with dementia in the world and it is estimated this number will rise to 115 million by the year 2050 (1). Alzheimer's disease (AD) is the most common cause of dementia. Since AD is still incurable, a lot of attention has been dedicated to the identification of risk factors for the onset of dementia (2). There are several risks that can be significantly influential. It has been noted that persons with severe head trauma, especially those that lost consciousness during the incident, develop AD more frequently. Recent studies have confirmed that people with diabetes (especially type 2) older than 60 years of age develop that illness twice as often. It is believed that 80% of persons with AD also have cardiovascular diseases, and high cholesterol is considered a risk factor. High blood pressure also adds to the development of AD and cardiac disease, as do all the other risk factors. A prototype of healthy food is Mediterranean food (fish, olive oil, integral wheat, red and violet fruits and vegetables) (3). Dementia is a syndrome in different groups of organic diseases of the central nervous system, most often neurodegenerative ones, leading to acquired progressive damage of cognitive functions together with personality changes of sufficient level to influence social behaviour and professional activity (4,5). The prevalence of dementia becomes significant in persons older than 60 years of age, when it doubles every five years. The incidence of dementia is 5.4–9.4% per year, and in the population of persons older than 85 years of age it is even 30-35% (6). The term dementia comes from Latin *dementia*, which literally means "insanity, madness". It was first used by Celsus (10 AD) but in the context of another illness - according to the description of the clinical picture it was mania. Although cognitive decline in older persons has been recognized

specifičnim patološko anatomskim supstratom. Njemački patolog i neurolog Alois Alzheimer je 1906. godine opisao slučaj progresivnog mentalnog propadanja 51-godišnje bolesnice i povezao ga sa specifičnim histološkim promjenama u mozgu, tzv. senilnim plakovima. Tek 70-tih godina prošlog stoljeća usvaja se stav da ne postoje nikakve bitne strukturne, histopatološke, biokemijske, a ni razlike u kliničkoj prezentaciji Alzheimerove i tzv. senilne demencije. Tako je Alzheimerova bolest (AB), samim tim i demencija općenito, prepoznata kao veliki medicinski i društveni problem (7). Predviđanja da će demencija biti jedan od vodećih medicinskih i društvenih problema potvrđuju se i podatcima da jedna trećina oboljelih nije sposobna ni za kakav oblik samostalnog života kao i da svjetska populacija produženjem prosječnog ljudskog vijeka i sve nižim stopama nataliteta kontinuirano stari (5). Danas je poznato kako su bolesnici s cerebrovaskularnim čimbenicima rizika u većoj opasnosti od razvoja obih tipova neurokognitivnog propadanja (8). Sve se veća pozornost u neurologiji i psihijatriji obraća problemu demencije, i to u znanstvenom i kliničkom aspektu. Nove dijagnostičke metode, te izgledi za uspješnu prevenciju i liječenje prenijeli su zanimanje medicine s fenomenološkog na etiološki, organski aspekt (8).

Prema Dijagnostičkom i statističkom priručniku za duševne poremećaje DSM-5 naziv velikog neurokognitivnog poremećaja primjereniji je od naziva demencija kod osoba sa značajnim oštećenjem koje može biti u samo jednoj kognitivnoj domeni (9). Naziv neurokognitivni poremećaj ima prednost i kod osoba mlađe životne dobi kod kojih je došlo do oštećenja kognitivnog funkcioniranja nakon, primjerice, traumatske ozljede mozga ili infekcije HIV-om (10).

Vaskularna demencija nastaje kao posljedica progresivne aterosklerotske bolesti malih krvnih žila mozga uz posljedične višestruke manje moždane udare i oštećenje moždanog parenhima. Oko 10 – 20 % slučajeva demencije

for a long time, it was only associated with a specific pathological anatomic substrate at the beginning of the previous century. German pathologist and neurologist Alois Alzheimer described a case of progressive mental decline in a 51-year-old patient in 1906 and connected it with specific histological changes in the brain, so-called senile plaques. It was not until the 1970s that the opinion that there were no significant structural, histopathological, biochemical, and clinical differences between AD and so-called senile dementia was adopted. AD, and dementia in general, was recognized as a serious medical and social problem (7). Projections that dementia would be one of the leading medical and social problems have also been confirmed by data according to which 1/3 of patients is uncapable of any sort of independent life and that the world population is continuously aging alongside the extension of average life expectancy and decreasing birth rates (5). Today it is known that patients with cerebrovascular risk factors are in greater danger of developing of both types of neurocognitive decline (8). In neurology and psychiatry, attention has increasingly been dedicated to the problem of dementia, in both the scientific and clinical aspects. New diagnostic methods and prospects for successful prevention and treatment have transferred medical interest from the phenomenological to the etiological, organic aspect (8). According to DSM-5, the term "major neurocognitive disorder" is more convenient than the term dementia in people with significant damage that may be present in only one cognitive domain (9). The term "neurocognitive disorder" also has advantages in the case of younger people with damage in cognitive functioning, e.g. following a traumatic brain injury or HIV infection (10).

Vascular dementia occurs as a consequence of the progressive atherosclerotic illness of small blood vessels of the brain, with consequential multiple smaller brain strokes and damage of

pripisuje se vaskularnoj demenciji. Preživljenje bolesnika s vaskularnom demencijom znatno je smanjeno (39 %) unutar 5 godina u usporedbi s kontrolnom skupinom standardiziranom prema dobi (11). Dokazana je povezanost šećerne bolesti i kognitivnog propadanja u bolesnika sa šećernom bolesti koja traje 10 godina i duže, naročito u slučaju pojavnosti dijabetesa prije 65. godine života, liječenja inzulinom ili oralnom antidijabetičkom terapijom te prisutnosti komplikacija dijabetesa. Također, u bolesnika koji su preboljeli moždani udar postoji povećana pojavnost prethodno ili tijekom hospitalizacije postavljene dijagnoze šećerne bolesti (16 – 24 %) (12).

Prevencija je i dalje najbolji pristup moždanom udaru odnosno posljedičnoj vaskularnoj demenciji. Cilj prevencije jest smanjiti rizik od nastanka moždanog udara djelovanjem na čimbenike rizika (13,14). Najčešći čimbenici rizika uključuju hipertenziju, povišene vrijednosti lipida u serumu, infarkt miokarda, atrijsku fibrilaciju i karotidnu stenozu, šećernu bolest, pušenje i konzumiranje alkohola, neprimjerenu prehranu te smanjenu tjelesnu aktivnost. Međutim, u posljednje se vrijeme sve više pozornosti obraća novim čimbenicima rizika za nastanak moždanog udara kao što su frakcije lipida, subklinička karotidna bolest, zadebljanje intime i medije karotidnih arterija, povećani indeks tjelesne mase, povećani omjer struk/bokovi, infekcije i upale, hiperhomocisteinemija, genski čimbenici. jer klasičnim se čimbenicima rizika ne može objasniti nastanak velikog broja moždanih udara (15-17). Unatoč napretku u području akutne terapije moždanog udara, prevencija je i dalje najbolji pristup moždanom udaru. Preventivne akcije mogu se temeljiti na "masovnom pristupu" naglašavajući promjenu nezdravoga u zdrav način života. Ovo uključuje adekvatnu prehranu sa smanjenim unosom soli, zasićenih masti i kolesterola, prestanak pušenja, smanjenje ekscesivnog pijenja alkohola, povećanje tjelesne aktivnosti. Masovnim

the brain tissue. About 10-20% of cases of dementia are attributed to vascular dementia.

Life expectancy of patients with vascular dementia is significantly reduced (39%) within 5 years in comparison with the control group standardized according to age (11). The correlation between diabetes mellitus and cognitive decline in patients with diabetes mellitus which has lasted for 10 years or longer has been proved, especially in the case of onset of diabetes before 65 years of age, insulin treatment or oral antidiabetic therapy, and the presence of complications related to diabetes. Also, there is increased occurrence of diabetes mellitus during hospitalisation or prior to it in patients who suffered a stroke (16-24%) (12). Prevention is still the best approach to stroke and consequential vascular dementia. The aim of prevention is to decrease the risk of stroke by influencing risk factors (13,14). The most common risk factors include hypertension, elevated serum lipid values, myocardial infarction, atrial fibrillation, and carotid stenosis, diabetes mellitus, smoking and alcohol consumption, inappropriate diet and reduced physical activity. Lately, attention has increasingly been dedicated to new risk factors for stroke such as lipid fractions, subclinical carotid illness, increased body mass index, increased waist/hips ratio, infections and inflammation, hypercholesterinaemia, and genetic factors because the occurrence of a large number of strokes cannot be explained by traditional risk factors (15-17). Despite the progress in the field of acute treatment of stroke, prevention still represents the best approach to stroke. Preventive actions can be based on a "massive approach" emphasising changes from an unhealthy to a healthy lifestyle. This includes adequate diet with reduced intake of salt, saturated fats, and cholesterol, cessation of smoking, reduction of excessive alcohol consumption, and increased physical activity. The massive approach can achieve a moderate reduction of risk factors in the en-

pristupom moguće je postići umjereno smanjivanje čimbenika rizika u cijeloj populaciji. Za provedbu masovnoga pristupa nužno je potrebna edukacija stanovništva suradnjom sa sredstvima masovnog priopćavanja – novine, radio, televizija, zakonodavne i ekonomske mjere (18-20) i sl.. „Visokorizični" pristup temelji se na identifikaciji osoba u zajednici koje imaju visok rizik za nastanak moždanog udara i zatim smanjivanje njihovih čimbenika rizika, što najčešće zahtijeva liječenje. U praksi se najčešće primjenjuju oba pristupa prevenciji moždanog udara – i masovni i visokorizični pristup – na ovaj način postižu se najbolji rezultati (21).

Pušenje cigareta značajno pridonosi učestalosti moždanog udara i rizični je čimbenik za mnoge druge bolesti i stanja (22). Meta-analiza 32 studije pokazala je kako pušenje povisuje rizik nastanka moždanog udara za 50 %. Također, pokazana je ovisnost o dozi: rizik nastanka moždanog udara povećava se s brojem popušenih cigareta (23). U Framinghamskoj studiji pokazana je negativna povezanost tjelesne aktivnosti i učestalosti moždanog udara u muškoj populaciji (24). Smatra se da je povoljan učinak povećane tjelesne aktivnosti na snižavanje rizika za nastanak moždanog udara posljedica učinka na snižavanje povišenih vrijednosti tlaka, smanjivanje tjelesne težine i poboljšanja tolerancije glukoze. Također, povećana tjelesna aktivnost dovodi do povišenja HDL-kolesterola i snižavanja LDL-kolesterola te do promocije zdravoga načina življenja (21). Zloporaba alkohola svakako je značajan čimbenik rizika za nastanak moždanog udara. Istraživanja pokazuju da su krvne žile alkoholičara prosječno deset godina starije od njegove biološke starosti (25).

Upotreba kokaina, pogotovo u njegovom alkaloidnom obliku ("*crack*"), povezana je s povećanom učestalošću cerebrovaskularne bolesti, kako ishemijske tako i hemoragijske (26). Rizik nastanka moždanog udara povećan je u žena koje uzimaju oralne kontraceptive, pogotovo oralne kontraceptive s visokim sadržajem

tire population. In order to implement a massive approach, it is necessary to educate the population through cooperation with the mass media - newspapers, radio, television – and use legislative and economic measures (18-20). The "high-risk" approach is based on the identification of community members who have a high risk for stroke and the reduction of their risk factors, which most often requires treatment. In practise, both of the approaches for the prevention of stroke – the massive and the high-risk approach – are applied and in this way the best results are achieved (21). Cigarette smoking significantly contributes to the frequency of stroke and is a risk factor for many other diseases and conditions (22). A meta-analysis of 32 studies showed that smoking increases risk of stroke by 50%. Dependence on dosage was also found: the risk of stroke increases with the number of cigarettes smoked (23). In the Framingham study, a negative correlation between physical activity and frequency of stroke in the male population was discovered (24). It is believed that the beneficial effect of increased physical activity on decreasing the risk of stroke is the consequence of effect on reducing high blood pressure, reduction of body weight, and improvement of glucose tolerance. Also, increased physical activity leads to the increase of HDL-cholesterol and decrease of LDL-cholesterol and the promotion of a healthy lifestyle (21). Alcohol abuse certainly represents a significant risk factor for stroke. Studies have shown that the blood vessels of alcoholics are on average ten years older than their biological age (25). Cocaine use, especially in its alkaloid form ("crack"), is connected with an increased frequency of cerebrovascular illness, ischemic as well as haemorrhagic (26). Risk of stroke is increased in women who take oral contraceptives, especially oral contraceptives with a high amount of estrogen. It has been proved that taking oral contraceptives increases the risk of stroke in women as their age increases (women older than 35 years of age) and in women

estrogena. Dokazano je kako uzimanje oralnih kontraceptiva povećava rizik nastanka moždanog udara u žena s povećanjem dobi (žene starije od 35 godina) te u žena koje imaju i druge čimbenike rizika, a osobito hipertenziju i pušenje. Oralni kontraceptivi povezani su i s povećanjem rizika subarahnoidnog krvarenja, što je posebno izraženo u žena koje imaju i hipertenziju (27). Učestalost moždanog udara povećava se kod povišenoga dijastoličkog i sistoličkog tlaka. Učestalost moždanog udara raste 46 % za svakih 7,5 mm Hg porasta dijastoličkog tlaka (28). Fibrilacija atrija jedan je od najznačajnijih neovisnih čimbenika rizika za nastanak moždanog udara; povisuje učestalost moždanog udara otprilike pet puta za prvi moždani udar. Kontrolirane kliničke studije pokazale su kako se primjenom peroralnih antikoagulansa (varfarin) može smanjiti rizik nastanka moždanog udara u bolesnika s fibrilacijom atrija za otprilike 70 % (29). Podatci iz novijih studija pokazuju kako postoji povezanost između povišenih vrijednosti kolesterola i učestalosti moždanog udara. U posljednje vrijeme spominju se i povišeni trigliceridi kao neovisan čimbenik rizika za nastanak moždanog udara (21). Sve više se govori i o frakcijama lipoproteina kao neovisnom čimbeniku rizika za nastanak moždanog udara. Tako se spominju apolipoprotein B (Apo B) koji je aterogen i povezan je s LDL-kolesterolom te apolipoprotein A (Apo A), koji je antiaterogen i povezan s HDL-kolesterolom. Omjer Apo B/Apo A veći od 1 značajan je čimbenik rizika za nastanak moždanog udara. Vrijednosti lipoproteina veće od 30 mg/dl povećavaju rizik za nastanak moždanog udara 1,8 puta (21). Šećerna bolest je neovisni čimbenik rizika za nastanak ateroskleroze i moždanog udara. U osoba sa šećernom bolešću utvrđena je dvostruko viša smrtnost nakon ishemijskog moždanog udara u odnosu na osobe bez šećerne bolesti (22). Značajna stenoza karotidne arterije povezana je s izraženim rizikom nastanka ipsilateralnog moždanog udara. Homocistein je produkt proteinskog metabo-

who have other risk factors, especially hypertension and smoking. Oral contraceptives are also associated with an increase in the risk of subarachnoid haemorrhage, which is especially pronounced in women with hypertension (27). The frequency of stroke increases with elevated diastolic and systolic pressure. The frequency of stroke increases by 46% for each 7.5 mmHg of increase in diastolic pressure (28). Atrial fibrillation is one of the most significant independent risk factors for stroke; it increases the frequency of stroke by approximately 5 times for the first stroke. Controlled clinical studies have shown that the application of peroral anticoagulants may reduce the risk for stroke in patients with atrial fibrillation by approximately 70% (29). Data from newer studies show the existence of correlation between elevated values of cholesterol and frequency of stroke. Lately, elevated triglycerides have been mentioned as an independent risk factor of stroke (21). Lipoprotein fractions are also increasingly mentioned as an independent risk factor for stroke. These include apolipoprotein B (Apo B), which is atherogenic and associated with LDL cholesterol, and apolipoprotein A (Apo A), which is antiatherogenic and associated with HDL cholesterol. The Apo B/Apo A ratio higher than 1 is a significant risk factor for stroke. Lipoprotein values higher than 30 mg/dl increase the risk for stroke by 1.8 (21,30). Diabetes mellitus represents an independent risk factor for atherosclerosis and stroke. In people with diabetes mellitus, the mortality rates after an ischemic stroke were twice as high than those in persons without diabetes mellitus (22). Significant stenosis of carotid artery is associated with pronounced risk for ipsilateral stroke. Homocysteine is a product of protein metabolism. Several studies have shown a correlation between increased values of total homocysteine and the frequency of vascular diseases and stroke (22). Taking into consideration an increase in risk behaviour of the population, such as smoking, reduced physical activity, and

lizma. Nekoliko studija pokazalo je povezanost između povišenih vrijednosti ukupnog homocisteina te učestalosti vaskularnih bolesti i moždanog udara (22).

Uzimajući u obzir sve rizičnije ponašanje populacije, koje čine pušenje, smanjena tjelesna aktivnost i nepravilna prehrana, potrebno je u što ranijoj životnoj dobi započeti s mjerama prevencije rizičnih čimbenika za nastanak kardiovaskularnih bolesti uz istodobno promicanje zdravog načina života (30). Kardiovaskularne bolesti vodeći su uzrok morbiditeta i mortaliteta, kako u razvijenim zemljama, tako i u Republici Hrvatskoj. Tako velika pojavnost vezana je uz današnji način života i loše životne navike, kao što su pušenje, nepravilna prehrana, pretjerana konzumacija alkohola i tjelesna neaktivnost, koje dovode do pretilosti, povišenog tlaka i povišenih vrijednosti masnoća u krvi (31). Prevenciju treba provoditi na razini promicanja zdravlja javnozdravstvenim modelom edukacije stanovništva i čuvanja okoliša te primarne i sekundarne prevencije. Cilj je primarne prevencije rana detekcija čimbenika rizika, a sekundarne prevencije liječenje pojedinih čimbenika i usporavanje razvoja ateroskleroze, što je osnovna patološka promjena u kardiovaskularnim bolestima (31).

Izloženost stresnim situacijama, posebno stresnim situacijama visokog intenziteta, nepovoljno utječe na zdravlje pa je tako i rizični čimbenik za razvoj neurokognitivnih poremećaja (32). Reakcija na stres povećava agregaciju trombocita, aktivira renin-angiotenzin sistem te na taj način povećava stvaranje angiotenzina II, koji povisuje krvni tlak. Stoga stres uzrokuje povećanu učestalost kardiovaskularnih i cerebrovaskularnih bolesti. Međutim, postoje poteškoće u točnom definiranju stresa i u načinu mjerenja "jačine" stresa. Objavljeno je svega nekoliko radova o utjecaju stresa na učestalost moždanog udara, a većina članaka opisuje utjecaj stresa povezanog s ratnim zbivanjima i učestalosti moždanog udara (26).

an inadequate diet, it is necessary to begin to implement prevention measures for risk factors for cardiovascular diseases as early in life as possible, while simultaneously promoting a healthy lifestyle (30). Cardiovascular diseases are a leading cause of morbidity and mortality in developed countries, which also holds true for Croatia.

This high occurrence is linked to the modern way of life and poor life habits such as smoking, an inadequate diet, excessive alcohol consumption, and physical inactivity, all of which lead to obesity, high blood pressure and high values of cholesterol in blood (31). Prevention should be implemented at the level promoting health through a public health model of population education and environmental protection; and primary and secondary prevention. The goal of primary prevention is early detection of risk factors, and secondary prevention is the treatment of individual ones factors and retardation of atherosclerosis, which is the underlying pathological change in cardiovascular disease (31). Exposure to stressful situations, particularly stressful situation of high intensity, influences health negatively and therefore also presents a risk factor for neurocognitive disorders (32). Reaction to stress increases aggregation of thrombocytes, activates the renin–angiotensin system and thereby increases the production of angiotensin II, which increases blood pressure.

Therefore, stress causes increased frequency of cardiovascular and cerebrovascular diseases.

However, there are difficulties in accurately defining stress and in mode measuring the "strength" of stress. Everything was published several papers discuss the impact of stress on stroke frequency, and most articles describe it the impact of stress associated with war events and stroke frequency (26). Although we are unable to influence the causes of stress, we can influence the way we cope with stress. Coping refers to behaviour and mental reactions by

Iako često ne možemo utjecati na uzroke stresa, možemo utjecati na to kako ćemo se suočiti sa stresom. Suočavanje se odnosi na ponašanje i psihičke reakcije kojima pojedinac nastoji svladati ili ublažiti pritiske izazvane prijetećom situacijom. Zdrav način života, odnosno mjere za poboljšanje zdravlja, dovode i do povećanja otpornosti na stres, pa poduzimanje ovih mjera ubrajamo u vještine suočavanja sa stresom: redovita i odgovarajuća prehrana, izbaciti ili smanjiti uzimanje kofeina, nikotina i šećera, baviti se tjelesnim vježbanjem radi održavanja tjelesne kondicije, osigurati redovit raspored odmora i dovoljno vremena za spavanje, promijeniti raspored obveza na poslu ili kod kuće, prekinuti s nekim aktivnostima koje nisu nužne, a koje su postale opterećenje (33).

Kako bismo spriječili ili ublažili stres, ponekad možemo promijeniti samu stresnu situaciju, a ponekad svoj odnos ili pogled na situaciju: zadržati osjećaj za humor u situacijama koje mogu izazvati stres, održavati ravnotežu između rada i zabave, usporiti, pronaći vrijeme za opuštanje, podijeliti probleme s prijateljima i obitelji, izvorima socijalne podrške, poznavati sebe i svoje granice tolerancije na stres, zatražiti savjete od stručne osobe (33).

Čini se normalnim očekivati izvjesnu izloženost stresu na radnom mjestu, jer stres je zapravo prirodna reakcija ukupnog čovjekovog sustava na okolnosti koje na njega postavljaju povećane zahtjeve i napore. Istovremeno prekomjerni stres može negativno utjecati na produktivnost te tjelesno i emocionalno zdravlje zaposlenika. Iako se ne mogu kontrolirati svi procesi u radnom okruženju i oko njega, to ne znači da smo nemoćni u prevenciji stresa i mogućih štetnih posljedica, čak i kada se pojave ozbiljnije poteškoće vezane uz posao (34). Doživljaj stresa, njegova snaga, važnost i moguće opasnosti kod svakog od nas rezultat su specifičnih doprinosa osobnog iskustva, usvojenih načina reagiranja na stres, korištenih mehanizama suočavanja sa stre-

which a person tries to overcome or alleviate pressures caused by a threating situation (34). A healthy lifestyle, that is, measures to improve health, they also lead to an increase resistance to stress, so taking these measures is one of our coping skills: regular and proper diet, throw out or reduce your intake of caffeine, nicotine and sugar, engage in physical exercise for maintenance physical fitness, ensure a regular schedule rest and enough time to sleep, change the schedule of appointments at work or at home, interrupt with some activities that are not necessary, which have become a burden (33). To prevent or relieve stress, sometimes we can change the stressful situation itself, and sometimes your relationship or view of the situation: maintain a sense of humor in situations that can cause stress, maintain a balance between work and fun, slow down, find time for relax, share problems with friends and families, sources of social support, know yourself and your limits of stress tolerance take advice from an expert (33).

It seems normal to expect some exposure to stress in the working environment since stress is actually a natural reaction of a person to circumstances that present an increase in demands and efforts. At the same time excessive stress can negatively affect productivity and the physical and emotional health of employees. Although we can not control all processes in and around the work environment, it does not mean that we are powerless in prevention of stress and possible adverse effects, even when more serious work-related difficulties arise (34). The experience of stress, its strength, importance and possible dangers in each are the result of specific contributions from the personal experience, adopted ways of responding to stress, the mechanisms of coping with stress, our abilities, our social environment and social support which in situations of stress we get, and the overall state of physical resources. In the broadest sense, stress can be

som, našim sposobnostima, socijalnim okruženjem i socijalnom podrškom koju u situacijama stresa dobivamo, te ukupnim stanjem tjelesnih resursa. U najširem smislu, stres se može odrediti kao tjelesna i psihološka reakcija na vanjske i unutarnje stresore (35). Stanje stresa je svako stanje u kojem se na bilo koji način (fizički, psihički ili socijalno) osjećamo ugroženi ili procjenjujemo da su ugroženi naši bližnji (35). Za pojedinca naizgled teška situacija ne mora izazvati stres ako pojedinac prosuđuje da ima načina i sposobnosti da joj se odupre (35). Kada postoji nerazmjer između zahtjeva koji se na nekog postavljaju i njegovih mogućnosti odupiranja, kao i kada pojedinac procijeni da nema dovoljno socijalne podrške koja bi mu pomogla u suočavanju sa stresom, tada se može govoriti o stresnoj situaciji (35). Iznimno je veliki broj okolnosti koje mogu biti povezane sa stresom, a kada se tome dodaju osobitosti pojedinaca, raznolikost stresora postaje još veća, pa postaje jasna potreba za pokušajem sistematiziranja izvora stresa (36). Ljudi pokazuju velike međusobne razlike u reakcijama na stres, no možemo se pitati postoje li neke zakonitosti koje vrijede za većinu ljudi. Niz pravilnosti danas je poznat, pa tako možemo reći da su duljina i snaga djelovanja stresa te povezanost s drugim stresovima bitni za njegove ishode (36). Reakcija na stres osim psiholoških reakcija na stres uključuje i kognitivne reakcije koje nam pomažu da putem pojačane pozornosti, bolje koncentracije, kvalitetnijeg prosuđivanja, bržeg odlučivanja i sl., brže i bolje reagiramo na stresnu situaciju. Međutim, ovisno o intenzitetu stresa i našoj prosudbi hoćemo li se moći oduprijeti, te reakcije mogu i otežati suočavanje sa stresnom situacijom u obliku poremećaja koncentracije, rasuđivanja i logičkog mišljenja (35,36). Osobe kojima je osnovni dio svakodnevnog posla pružanje usluga skrbi drugim ljudima, kao što to čine zdravstveni djelatnici, svakodnevno su izložene djelovanju brojnih stresora na poslu. Što su

determined as a physical and psychological reaction to external and internal stressors (35). A state of stress is any condition in which in any way (physical, who, mentally or socially) feel threatened or we estimate that our loved ones are endangered (35). For an individual, a seemingly difficult situation does not have to cause stress if the individual judges that they have ways and ability to resist it (35). When there is a disproportion between the requirements being made on they also ask one's ability to resist it, as well as when one estimates that one is gone enough social support to help him dealing with stress, one can then speak on the stressful situation (35). It is an extremely large number circumstances that may be related to stress, and when added to the particularities of individuals, the diversity of stressors becomes even greater, so there is a clear need to try to systematize sources of stress (36). People show great differences in responses to stress, but we can to wonder if there are any laws that apply for most people. The sequence of regularities is known today, so we can say that the length and strength of the effects of stress and the connection with other stresses relevant to its outcomes (36). Stress response in addition to psychological responses to stress, it also includes cognitive reactions that help us through increased attention, better concentration, better judgment, faster decision making and etc., we respond faster and better to a stressful situation. However, depending on the intensity of the stress and ours judging whether we can resist these reactions can also make it difficult to deal with stress the situation in the form of a concentration disorder, reasoning and logical thinking (35,36). People who are an essential part of their daily work providing care to other people, such as this is what health professionals do, they are everyday exposed to the many stressors at work. The more complex the care services they provide, and the possibility of failure and the severity of the consequences greater - the greater is the exposure to stress

usluge skrbi koje pružaju složenije, a mogućnost neuspjeha i težina posljedica veća - to je veća i izloženost stresu na poslu (36). Reaktivne pristupe sprječavanju okolnosti iz kojih proizlazi stres možemo pokušati odrediti kao one u kojima se nastoji otkriti i promijeniti one osobine radnog mjesta ili radnika koje su vjerojatno izazvale stres (36). Proaktivni postupci sprječavanja okolnosti iz kojih proizlazi stres usmjereni su na samo radno mjesto, a ne na zaposlenika i njima se pokušava stvoriti radno okruženje bez stresa koliko je više moguće. Kada govorimo o primarnim pristupima prevencije u praksi, treba primijetiti da su ovi pristupi češće usmjereni na zaposlenika (pojedinca) nego na radno mjesto (36). Često se smatra da su proaktivni pristupi preskupi ili ometajući za učinkoviti radni proces. Također se često čini kako ih je teže provesti nego strategije koje su usmjerene na pojedinca (36). U sekundarne strategije za upravljanje stresom ubraja se i razvoj vještina suočavanja.

Postoje tri osnovna oblika prevencije, suzbijanja i ublažavanja stresa i izgaranja na poslu, a zbog svoje prirode ti oblici prevencije mogu se nazvati samozaštita, suzaštita i stručna pomoć (35). Ako ne možemo promijeniti našu okolinu, možemo promijeniti naš pogled prema van i način na koji percipiramo našu okolinu. Kako je naša percepcija bitno određena našim stajalištem, istu situaciju u kojoj se nalazimo možemo različito doživjeti. Kad bismo imali drugačiji odnos prema pojedinim situacijama, one ne bi morale rezultirati stresom (37).

Osim farmakološke terapije kod oboljelih od neurokognitivnih poremećaja primjenjuju se i različite nefarmakološke metode i postupci usmjereni na bihevioralne i psihosocijalne, ali i kognitivne simptome. Iako postoje brojna istraživanja iz područja nefarmakoloških aspekata terapije demencija, zbog postojanja metodoloških nedostataka i razlika između studija, njihovi rezultati iziskuju dalje potvrde učinkovitosti pojedinačnih tehnika i metoda.

at work (36). Reactive approaches to preventing circumstances from which stresses we can try to determine as those in which it seeks to discover and change itself those characteristics of the workplace or workers that they are probably caused stress (36). Proactive procedures to prevent stressful circumstances are focused on the workplace itself, a not on the employee and trying to create them a stress-free work environment as much as possible. When it comes to primary approaches prevention in practice, it should be noted that these approaches more often focused on the employee (individual) than on the workplace (36). It often does considers proactive approaches too expensive or interfering with an efficient workflow. Also they often seem to be more difficult to implement than individual-centered strategies (36). In secondary strategies for stress management development of coping skills is also included. There are three basic forms of preventing, controlling and alleviating stress and burnout at work, and because of their nature, these forms of prevention can be call self-protection, co-protection and professional help (35). If we cannot change our environment, we can change our view towards outside and the way we perceive our environment.

How our perception is essentially determined by ours from the standpoint, the same situation we are in we may experience differently. If we had different attitude to individual situations, they should not result in stress (37). In addition to pharmacological therapy in patients with neurocognitive disorders apply and various non-pharmacological methods and procedures focused on behavioral and psychosocial, but also cognitive symptoms. Although there are numerous studies in the field of non-pharmacological aspects of dementia therapy, for its existence methodological shortcomings and differences between study, their results warrant further confirmation the effectiveness of individual techniques and

Primjenjuju se sljedeće tehnike: edukacija njegovatelja, adaptacija okruženja, muzikoterapija, aromaterapija, terapija svjetlom, terapija uz pomoć kućnih ljubimaca, strukturirane aktivnosti, fizička aktivnost, kognitivna rehabilitacija, bihevioralna terapija, terapija validacije i dr. Primjena nefarmakološke terapije pokazala je poboljšanje simptoma u smislu ublažavanja nekih bihevioralnih poremećaja (agitacija, agresija), redukcije depresivnosti, usporavanja progresije kognitivnih disfunkcija, očuvanje samostalnosti u izvođenju pojedinih zadataka vezanih za svakodnevni život, i poboljšanja kvalitete života (10).

Nefarmakološke mjere kod oboljelih od demencija su ponajprije usmjerene na nekognitivne simptome (10). U ove simptome spadaju: agitacija, agresija, psihoza, seksualna dezinhibicija, problemi prehrane. Ovi simptomi su čest razlog za institucionalizaciju oboljelih i veliki su problem za njegovatelje (10).

Najčešći oblik akutnog moždanog sindroma je delirij. To je akutna, najčešće reverzibilna, nespecifična psihoza, koju obilježavaju dezorijentiranost, konfuznost i dezorganizirano ponašanje (38). Diljem svijeta procjenjuje se da je učestalost delirija 0,4 % u općoj populaciji uz povećanje do 1 % u populaciji dobi iznad 55 godina (39). U bolnicama je delirij češći i pojavljuje se u 22 % pacijenata koji se liječe na bolničkim odjelima, 11 – 35 % na kirurškim, i do 80 % bolesnika u jedinicama intenzivne skrbi (40). Delirij može promijeniti tijek podležećoj demenciji uz dramatično pogoršanje na putanji kognitivnog propadanja. Studije praćenja su pokazale da se osobe s demencijom s preboljenim delirijem rijetko vraćaju na prijašnju razinu funkcioniranja, imaju veću stopu kognitivnih oštećenja, institucionalizacije i smrti (9). Unatoč visokoj stopi učestalosti simptomi delirija nisu uvijek prepoznati (41). Budući da se pokazalo kako se delirij može u velikoj mjeri prevenirati, na delirij više ne gledamo kao na neizbježnu komplikaciju bolesti te je njego-

methods. The following techniques are used: educating herspeakers, adaptation of the environment, music therapy, aromatherapy, light therapy, therapy with pet assistance, structured activities, physical activity, cognitive rehabilitation, behavioral therapy, validation therapy and other. The use of non-pharmacological therapy showed is an improvement in symptoms in terms of alleviating some behavioral disorders (agitation, aggression), depression reduction, slowing down progression of cognitive dysfunction, preservation independence in performing individual tasks related to daily life, and improvements quality of life (10). Non-pharmacological measures in patients with dementia are primarily focused on non-cognitive symptoms (10). These symptoms include: agitation, aggression, psychosis, sexual disinhibition, nutrition problems. These symptoms are a common reason for the institutionalization of the sick and are a major problem for caregivers (10). The most common form of acute brain syndrome is delirium. It is acute, most often reversible, nonspecific psychosis, characterized by disorientation, confusion and disorganized behavior (38). Worldwide, it is estimated that the incidence of delirium is 0.4% in the general population with an increase of up to 1% in the population above 55 (39). In hospitals, delirium is more common and occurs in 22% of patients treated in hospital wards, 11 - 35% in surgical, and up to 80% of patients in intensive care units (40). Delirium can change the course of the underlying dementia with dramatic worsening in the trajectory of cognitive decline. Monitoring studies have shown that people with dementia with delirium rarely return to their previous one level of functioning, have a higher rate of cognitive impairment, institutionalization, and death (9). Despite the high incidence of symptoms delirium is not always recognized (41). Because it has been shown how delirium can be extensive prevention, we no longer regard delirium as the inevitable complication of

va incidencija postala koristan parametar za procjenu i praćenje kvalitete medicinske skrbi (42). Stoga u bolesnika koji su visoko vulnerabilni za delirij, kao što su osobe s demencijom i koegzistirajućim zdravstvenim stanjima može doći do razvoja delirija i kod relativno benignih razloga kao što je promjena jedne doze lijeka za spavanje. Suprotno tome, kod pacijenata koji nisu osjetljivi za nastanak delirija, on će se eventualno razviti tek nakon izlaganja multiplim štetnim događajima kao što je opća anestezija, velika operacija i psihoaktivne supstancije. Rizični čimbenici za razvoj delirija su i oštećenja mozga prije pojave delirantne epizode. To se odnosi na cerebrovaskularnu bolest i njezine posljedice (cerebrovaskularni inzult), demenciju, tumore i kraniocerebralnu traumu (43).

Potreban je oprez, jer atipični antipsihotici kao i parenteralni haloperidol nose rizik od moždanog udara i produljenja QT intervala. Daljnji neželjeni učinci su somnolencija, ekstrapiramidni učinci (tremor, rigidnost muskulature, nemir, poteškoće s gutanjem), snižen prag za epileptičke napadaje, neuroleptički maligni sindrom, kardiovaskularni učinci (aritmije, iznenadna smrt, hipotenzija, tahikardija), pneumonija, urinarna retencija, posturalna nestabilnost, padovi, duboka venska tromboza i metabolički sindrom (povećanje tjelesne težine, inzulinska rezistencija i hipertrigliceridemija). Čak je i kratkotrajno liječenje povezano s povećanom smrtnosti. Potrebno je izbjegavati haloperidol kod Parkinsonove demencije i demencije s Lewyjevim tjelešcima. Alternativa kod tih pacijenata je lorazepam. Nekoliko prikaza slučajeva pokazali su obećavajuće rezultate s inhibitorima kolinesteraze primjerice donepezilom, ali je potrebno provesti još kontroliranih kliničkih ispitivanja prije nego se mogu dati pouzdane preporuke. Benzodiazepini nisu preporučljivi kao prva linija u liječenju delirija, jer mogu pogoršati psihički status i izazvati prekomjernu sedaciju (44).

the disease is his incidence has become a useful parameter for assessing and monitoring the quality of medical care (42). Therefore, in patients who are highly vulnerable to delirium, such as people with dementia and coexisting medical conditions, can occur development of delirium even for relatively benign causes such as changing a single dose of a sleeping medicine. In contrast, in patients who are not sensitive to the onset of delirium, it will eventually develop only after exposure to multiple adverse events such as general anesthesia, major surgery, and psychoactive substances risk. Factors for the development of delirium are brain damage before the onset of the delirious episode. It refers to cerebrovascular disease and its consequences (cerebrovascular stroke), dementia, tumors and craniocerebral trauma (43). Caution is needed because atypical antipsychotics like and parenteral haloperidol carry the risk of given stroke and QT interval prolongation. Further side effects are somnolence, extrapyramidal effects (tremor, muscular rigidity, restlessness, difficulty swallowing), reduced threshold for seizures, neuroleptic malignancies syndrome, cardiovascular effects (arrhythmias, sudden death, hypotension, tachycardia), pneumonia, urinary retention, postural instability, falls, deep vein thrombosis and metabolic syndrome (weight gain, insulin resistance and hypertriglyceridemia). Even short-term treatment is associated with increased mortality. Haloperidol in Parkinson's and Lewy body dementia should be avoided. An alternative to code of these patients is lorazepam. Some views cases showed promising results with cholinesterase inhibitors, for example donepezil, but more controlled clinical trials need to be conducted before they can be make reliable recommendations. Benzodiazepines are not recommended as a first line in the treatment of delirium, as they can worsen psychic status and cause excessive sedation (44). Patient associations are a significant subject in the process are educations of caregivers and families of the

Udruge bolesnika su značajan subjekt u procesu edukacije njegovatelja i obitelji oboljelih, pa ih je nužno dotirati i podupirati. Grupe samopomoći formirane unutar udruga od velike su koristi u ohrabrivanju njegovatelja i prevenciji sagorijevanja (tj. *burn-out* sindroma) (45). U kasnijim, odnosno terminalnim fazama AB, kada obitelj najčešće više nije u stanju adekvatno skrbiti za bolesnika, nužno je oboljelog smjestiti u specijaliziranu ustanovu (45).

Prema algoritmu Svjetske zdravstvene organizacije iz 2019. godine glavni cilj preventivnih aktivnosti potrebno je usmjeriti na održavanje i poboljšanje fizičke aktivnosti, aktivnosti vezane uz pušenje i konzumaciju alkoholnih pića i promicanju prestanka pušenja kao i konzumacije alkoholnih pića, intervencija s ciljem poboljšanja kvalitete prehrane, poboljšanje socijalne podrške te kognitivnih treninga, kontrolu tjelesne težine, tlaka, dijabetesa, vrijednosti lipida, ali i liječenju depresije, problema sa sluhom (46).

ZAKLJUČAK

Sve je više dokaza koji upućuju na to da je baš zdrav način života, znači mediteranska prehrana, umjerena fizička aktivnost (npr. hodanje), socijalna interakcija i vježbanje mozga, uz nepušenje, izbjegavanje ozljeda, visokog šećera i kolesterola, presudno važna za smanjenje rizika od nastanka demencije, odnosno AB-a. U smanjenju razvoja demencije kada je riječ o osobama treće dobi od ključnog je značenja nastavak njihove mentalne aktivnosti (tzv. mentalni fitnes). Vrlo je korisno kada se (stariji) ljudi redovito bave nekim društvenim igrama, različitim mozgalicama, križaljkama, sudokom, rebusima i slično, jer sve to služi i kao svojevrstan kognitivni trening.

sick, well it is necessary to touch and support them. Self-help groups formed within associations are large used in caregiver encouragement and prevention combustion (ie, burn-out syndromes) (45). In the later or terminal stages of AB, when most often the family is no longer adequate to care for the patient, it is necessary to place the patient in a specialized institution (45).

According to the World Health Organization Algorithm of 2019, the main goal of preventative activities should be focused on maintaining and improving physical activity, activities related to smoking and alcohol consumption drinks and promoting smoking cessation as well as consumption of alcoholic beverages, interventions with a purpose improving diet quality, improving social support and cognitive training, weight control, pressure, diabetes, lipid values, but also treatment for depression, problems with hearing (46).

CONCLUSION

In conclusion, we can say that there is a growing number of evidence suggesting that a healthy lifestyle, which means a Mediterranean diet, moderate physical activity (walking), social interaction, and mental exercise, along with avoidance of smoking, injuries, high values of glucose, and cholesterol, is of crucial importance for the reduction of risks for dementia and AD. In reducing the development of dementia when it comes to it is crucial for older people to continue their mental activity (so called mental fitness). Very useful when (older) people regularly engage in some board games, different puzzles, crossword puzzles, sudoku, rebuses and the like, because it all serves as a kind of cognitive training.

LITERATURA/*REFERENCES*

1. Jia L, Quan M, Fu Y, Zhao T, Li Y, Wei C et al. Dementia in China: epidemiology, clinical management, and research advances. Lancet Neurol 2019. doi: 10.1016/S1474-4422(19)30290-X.
2. Mimica N. Demencija i palijativna skrb. Neurol Croat 2011; 60(3-4): 119-24.
3. Kadojić D, Demarin V, Dikanović M, Lušić I, Tuškan MM, Trkanjec Z. Incidence of stroke and transient ischemic attack in Croatia: A population based study. Coll Antropol 2015; 3: 723-7.
4. Burns A, Iliffe S. Dementia. BMJ 2009; 338: b75.
5. Salloway S, Correia S. Alzheimer disease: time to improve its diagnosis and treatment. Cleve Clin J Med 2009; 76: 49-58.
6. Taylor D, Paton C, Kapur S. The Maudsley prescribing guidelines. 10th ed. London: Informa Healthcare, 2009.
7. Tobinick EL, Gross H. Rapid cognitive improvement in Alzheimer's disease following perispinal etanercept administration. J Neuroinflammation 2008; 5:32.
8. Trkanjec Z. Vaskularna demencija. Medix 2014; 20:111.
9. Američka psihijatrijska udruga, Dijagnostički i statistički priručnik za duševne poremećaje DSM-5. Zagreb: Medicinska naklada, 2017.
10. Mimica N, Kušan-Jukić M. Demencija i psihički poremećaji. Medicus 2017; 26: 215-22.
11. Warlow C, Sudlow C, Dennis M, Wardlaw J, Sandercock P. Stroke. Lancet 2003; 362: 1211-24.
12. Zavoreo I, Madžar Z , Demarin V, Bašić Kes V. Vascular cognitive impairment in diabetes mellitus: Are prevention and treatment effective? Acta Clin Croat 2014; 53: 326-33.
13. Lisak M, Trkanjec Z, Demarin V. Lipid lowering treatment in secondary stroke prevention. Acta Clin Croat 2005; 44: 131-7.
14. Demarin V. Najnovije spoznaje u prevenciji, dijagnostici i liječenju moždanog udara u starijih osoba. Medicus 2005; 14: 219-28.
15. Bowler JV. Modern concept of vascular cognitive impairment. Br Med Bull 2007; 83: 291-305.
16. Gorelick PB, Scuteri A, Black SE *et al*. Vascular contributions to cognitive impairment and dementia: a statement for healthcare professionals from the American heart association/American stroke association. Stroke 2011; 42: 2672-713.
17. Demarin V, Trkanjec Z. Vaskularni kognitivni poremećaji. Medix 2012; 101: 196-201.
18. Demarin V, Rundek T, Tomljanović B, Caeillo Pintos J, Masso Estrade J. Prevention of stroke - a report from collaboration project between Zagreb and Barcelona. Neurol Croat 1992; 41: 43-50.
19. Bonner LL, Kanter DS, Manson JE. Primary prevention of stroke. Engl N Med J 1995; 333: 1392-400.
20. Alberts MJ, Perry A, Dawson DV, Bertels C. Effects of public and professional education on reducing the delay in presentation and referral of stroke patients. Stroke 1992; 23: 352-6.
21. Zavoreo I, Bašić Kes V, Bosnar Puretić M, Demarin V. Post-stroke depression. Acta Clin Croat 2009; 48: 329-33.
22. Bašić Kes V, Jurašić MJ, Zavoreo I, Lisak M, Jeleč V, Zadro Matovina L. Age and gender differences in acute stroke hospital patients. Acta Clin Croat 2016; 55: 69-78.
23. Thrift AG, Mcneill JJ, Donnan GA. The risk of intracerebral haemorrhage with smoking. Cerebrovasc Dis 1999; 9: 34-9.
24. Gillman MW, Cupples LA, Gagnon D. Protective effect of fruits and vegetables on development of stroke in men. JAMA 1995; 273: 1113-7.
25. Sacco R, Elkind M, Boden Albala B. The protective effect of moderate alcohol consumption on ischaemic stroke. JAMA 1999; 4: 56.
26. Demarin V, Podobnik Šarkanji S, Lovrenčić Huzjan A. Stress as a risk factor in the development of neurological diseases. Acta Clin Croat 1992; 31: 233-8.
27. Bousser MG, Kittner SJ. Oral contraceptives and stroke. Cephalgia 2000; 20: 183-9.
28. SHEP Cooperative Research Group: Prevention of stroke by antihypertensive drug treatment in older persons with isolated systolic hypertension: Final results of the Systolic Hypertension in the Elderly Program /SHEP. JAMA 1991; 365: 3255-64.
29. European Atrial Fibrillation Study Group. Optimal oral anticoagulation therapy with nonrheumatic atrial fibrillation and recent cerebral ischaemia. Engl N Med J 1995; 333: 5-10.
30. Fong TG, Tulebaev S, Inouye SK. Delirium in elderly adults – diagnosis, prevention and treatment. Nat Rev Neurol 2009; 5: 210–20. doi: 10.1038/nrneurol.2009.24.
31. Maćešić B, Špehar B. Prevencija kardiovaskularnih bolesti u primarnoj zdravstvenoj zaštiti. SG/NJ 2014; 19: 30-41. DOI: 10.11608/sgnj.2014.19.008.
32. Šupe S, Poljaković Z, Kondić Lj, Unušić L, Alvir D. Neurološke osnove stresa i rizik razvoja moždanog udara. Neurol Croat 2011; 60(1):21-8.
33. Bilić V. Psihološki čimbenici kod kardiovaskularnih bolesti. Medix 2009; 8: 301-3.
34. Stranks J. Stress at Work (Management and Prevention). Oxford: Elsevier Butterworth-Heinemann, 2005.
35. Harkness AMB, Long BC, Bermbach N, Patterson K, Jordan S, Kahn H. Talking about stress at work: Discourse analysis and implications for stress interventions. Work Stress 2005; 19(2): 121-36.
36. Lučanin D. Mjere prevencije i sprečavanja stresa. Sigurnost 2014; 56: 223-34.
37. Folkman S, Lazarus RS. Stres, procjena i suočavanje, Jastrebarsko: Naklada Slap, 2004.

38. Lucijanić D, Kušan Jukić M, Mimica N. Delirij superponiran na demenciju: klinička slika i preporuke za liječenje. Soc psihijat 2016; 44: 130-9.
39. Van Munster BC, de Rooji S. Delirium: A synthesis of current knowledge. Clin Med 2014; 14: 192-5.
40. Ely EW, Inouye SK, Bernard GR, Gordon S, Francis J, May L *et al*. Delirium in mechanically ventilated patients: validity and reliability of the confusion assessment method for the intensive care unit (CAM-ICU). JAMA 2001; 286: 2703-10.
41. Fick D, Foreman M. Consequences of not recognizing delirium superimposed on dementia in hospitalized elderly individuals. J Gerontol Nurs 2000; 26: 30-40.
42. Siddiqi N, Stockdale R, Britton AM, Holmes J. Interventions for preventing delirium in hospitalised patients. Cochrane Database Syst Rev 2007; (2):CD005563.
43. Begić D. Psihopatologija. Drugo, dopunjeno i obnovljeno izdanje. Zagreb: Medicinska naklada, 2014.
44. Uzun S, Kozumplik O, Mimica N, Folnegović-Šmalc V. Nuspojave psihofarmaka. Zagreb: Medicinska naklada i Psihijatrijska bolnica Vrapče, 2005.
45. Mimica N. Komunikacija s osobom oboljelom od demencije. Medix 2011; 91: 28-30.
46. World Health Organisation. Risk reduction of cognitive decline and dementia. Geneva: WHO guidelines, 2019.

Javljanje sumanutosti u bolesnika s demencijom – pregled literature

/ Occurrence of Delusions in Patients with Dementia – Literature Review

Oliver Kozumplik[1,2], Suzana Uzun[1,2], Dubravka Kalinić[1,3], Ivan Požgain[2], Ninoslav Mimica[1,3]

[1]Klinika za psihijatriju Vrapče, Referentni centar Ministarstva zdravstva za Alzheimerovu bolest i psihijatriju starije životne dobi, Zagreb, [2]Sveučilište Josipa Jurja Strossmayera, Medicinski fakultet, Osijek, [3] Sveučilište u Zagrebu, Medicinski fakultet, Zagreb, Hrvatska

/ [1]*University Psychiatric Hospital Vrapče, Referral Centre for Alzheimer's Disease and Old Age Psychiatry, Zagreb,* [2]*University Josip Juraj Strossmayer in Osijek, School of Medicine, Osijek,* [3] *University of Zagreb, School of Medicine, Zagreb, Croatia*

Cilj: Pregled literature koja se odnosi na javljanje različitih tipova sumanutosti u osoba s demencijom i njihovo liječenje. *Metode:* Literatura je pretraživana korištenjem PubMed-a. *Pregled literature*: Kod starijih osoba s demencijom često se javljaju psihotični simptomi kao što su sumanutosti, ali sadržaj sumanutosti u starijih osoba razlikuje se od sumanutosti kod mlađih pojedinaca. Analiza sumanutosti i halucinacija treba ispitati alternativne etiologije, uključujući pogrešnu dijagnozu i nesporazum, pogrešno tumačenje stvarnosti zbog kognitivnih gubitaka, osjetilne deprivacije i gubitka vida, neodređenih senzacija, delirija i medicinskih uzroka. Nefarmakološki tretmani učestalo proizlaze iz etiologije kao što su poboljšanje osjetilnih funkcija putem slušnih pomagala ili naočala, provođenje stimulacije, mijenjanje ranijih situacija kod kojih postoji sklonost pogrešnom tumačenju (npr. odrazi u prozorima), ili izbjegavanje pogrešnog tumačenja (npr. osiguravanjem da je odgovarajući objekt dostupan te da nema osjećaja gubitka ili pokradenosti). *Zaključci*: Podatci iz literature pokazali su da se kod osoba s demencijom često javljaju psihotični simptomi kao što su sumanutosti, ali su također pokazali razlike u učestalosti različitih tipova deluzija u demenciji. Osim farmakoterapije, bolje razumijevanje etiologije pogrešnog tumačenja stvarnosti (zbog kognitivnih gubitaka, osjetilne deprivacije i gubitka vida, itd.) pokazuje važnost nefarmakoloških oblika liječenja koji često proizlaze izravno iz etiologije ovakvih simptoma. Daljnja istraživanja potrebna su za stjecanje boljeg razumijevanja etiologije sumanutosti u osoba s demencijom, te za pronalaženje učinkovitog liječenja.

/ Aim: to review literature regarding the occurrence of different types of delusions in dementia and their treatment. Methods: The literature search was conducted using PubMed. Review of literature: The elderly with dementing illnesses often present with psychotic symptoms such as delusions, but the thematic content of delusions in the elderly differs from that of delusions expressed by younger individuals. An analysis of delusions and hallucinations must examine alternative etiologies, including misdiagnosis and misunderstanding, the misinterpretation of reality due to cognitive losses, sensory deprivation and vision loss, ambiguous sensations, and delirium and medical causes. Nonpharmacologic treatments frequently follow directly from etiology, such as improving sensory function via hearing aids or eyeglasses, providing stimulation, changing situations prone to misinterpretation (e.g. reflections in windows), or circumventing misinterpretations (e.g. ensuring that an equivalent object is available so there is no sense of loss or theft). Conclusions: The data from literature showed that people with dementia often present with psychotic symptoms such as delusions but also revealed differences in frequencies of different types of delusions in dementia. Apart from pharmacological treatment, a better understanding of the etiology of misinterpretation of reality (due to cognitive losses, sensory deprivation, vision loss, etc.) reveals the importance of nonpharmacologic treatments that frequently follow directly from the etiology of such symptoms. Further studies are necessary for a better understanding of the etiology of delusions in people with dementia, as well as finding effective treatment.

ADRESA ZA DOPISIVANJE / *CORRESPONDENCE*:
Doc. dr. sc. prim. Oliver Kozumplik, dr. med.
Klinika za psihijatriju Vrapče
Bolnička cesta 32
10090 Zagreb, Hrvatska
Tel: +385 1 3780 666
E-pošta: oliver.kozumplik@hotmail.com

KLJUČNE RIJEČI / *KEY WORDS*:
Alzheimerova bolest / *Alzheimer's Disease*
Demencija / *Dementia*
Halucinacije / *Hallucinations*
Sumanutosti / *Delusions*

TO LINK TO THIS ARTICLE: https://doi.org/10.24869/spsih.2019.318

UVOD

Alzheimerova bolest (AB) povezana je s kognitivnim i funkcionalnim oštećenjem, kao i s neuropsihijatrijskim posljedicama, uključujući psihotične simptome kao što su sumanutosti i halucinacije. Čvrsti dokazi podržavaju potrebu za istraživanjem sumanutosti odvojeno od halucinacija (1)**.** Psihoza u AB ukazuje na ozbiljniji fenotip, s bržim kognitivnim propadanjem koje počinje čak i prije javljanja psihoze (2). Sumanutosti su uobičajene, onesposobljavajuće i perzistentne u tijeku demencije (3). Dok sumanutosti u AB odgovaraju fenotipu različitom od AB bez sumanutosti, podtipovi sumanutosti mogu također definirati daljnje razlike kliničkih entiteta. Persekutorne sumanutosti mogu se javiti ranije tijekom bolesti i imaju značajniju genetsku komponentu nego sumanutosti pogrešnog prepoznavanja, koje su povezane s rastućim kognitivnim oštećenjem i uznapredovalom demencijom (1). Psihotični simptomi, koji se sastoje od sumanutosti i halucinacija javljaju se u oko polovice pojedinaca s AB (AB sa psihozom, AB+P) i takvi pojedinci imaju izraženiju agitiranost, agresivnost, depresiju, funkcionalno oštećenje i mortalitet nego pojedinci bez psihoze (AB-P) (4). Rezultati pregleda istraživanja objavljenih od 1990. do 2001. godine, koja se bave epidemiologijom, fenomenologijom, tijekom, etiologijom, procjenom i liječenjem sumanutosti i halucinacija u AB pokazali su prevalenciju sumanutosti u pacijenata s AB u rasponu od 16 do 70 % u

INTRODUCTION

Alzheimer's disease (AD) is associated with cognitive and functional impairment as well as neuropsychiatric sequelae, including psychotic symptoms such as delusions and hallucinations. Strong evidence supports the need to study delusions separate from hallucinations (1). Psychosis in AD indicates a more severe phenotype, with more rapid cognitive decline beginning even before psychosis onset (2). Delusions are common, disabling, and persistent in the course of dementia (3). While delusions in AD correspond to a phenotype distinct from AD without delusions, subtypes of delusions may also define further distinct clinical entities. Persecutory delusions may occur earlier in the illness and have a more significant genetic component than misidentification delusions, which are associated with increased cognitive impairment and advanced dementia (1). Psychotic symptoms, comprised of delusions and hallucinations, occur in about half of individuals with Alzheimer's disease (AD with psychosis, AD+P), and these individuals have greater agitation, aggression, depression, functional impairment, and mortality than individuals without psychosis (AD-P) (4). The results of a review of studies published from 1990 to 2001 that address the epidemiology, phenomenology, course, etiology, assessment, and treatment of delusions and hallucinations in Alzheimer's disease showed the prevalence of delusions in Alzheimer's disease patients

pregledanim radovima, i prevalenciju halucinacija u rasponu od 4 do 76 %. Sumanutosti i halucinacije imali su sklonost perzistiranju tijekom vremena te čestom ponavljanju u tijeku AB (5). Premda je točna etiopatogeneza AB+P nejasna, polje genomike koje se brzo razvija nastavlja širiti naše razumijevanje ove bolesti. Nekoliko neovisnih istraživanja pokazalo je obiteljsku agregaciju i nasljednost AB+P (4). Neuroslikovna istraživanja (*neuroimaging*) ukazuju da osobe s AB+P pokazuju veća kortikalna sinaptička oštećenja nego osobe s AB bez psihoze, što se odražava u obliku reduciranog volumena sive tvari, reduciranog regionalnog protoka krvi i reduciranog regionalnog metabolizma glukoze; *neuroimaging* i dostupni post mortem dokazi dodatno ukazuju da su oštećenja kod AB+P, u odnosu na pojedince s AB bez psihoze, lokalizirana u neokorteksu, prije nego u medijalnom temporalnom režnju, dok neuropatološka istraživanja pružaju konzistentne dokaze o ubrzanom nakupljanju hiperfosforiliranog s mikrotubulima povezanog tau proteina u AB+P (2).

Cilj ovog članka je pregled literature koja se odnosi na javljanje različitih tipova sumanutosti u demenciji i njihovo liječenje.

METODE

Literatura je pretraživana korištenjem PubMed-a.

PREGLED LITERATURE

Sumanute ideje su česte među bolesnicima s AB i mogu se konceptualno povezati s deficitima pamćenja (ne može se sjetiti točnog podatka što dovodi do netočnog vjerovanja) ili lošeg uvida (ne može shvatiti nelogičnost vjerovanja). Sumanutosti u AB su povezane s disfunkcijom u specifičnim frontalnim i temporalnim kortikalnim regijama (6).

ranging from 16 to 70% in the reviewed reports, and the prevalence of hallucinations ranging from 4 to 76%. Delusions and hallucinations tended to persist over time and recur often during the course of Alzheimer's disease (5). Although the exact ethiopathogenesis of AD+P is unclear, the rapidly developing field of genomics continues to expand our understanding of this disease. Several independent studies have demonstrated familial aggregation and heritability of AD+P (4).

Neuroimaging studies suggest that AD+P subjects demonstrate greater cortical synaptic impairments than AD subjects without psychosis, which is reflected in reduced grey matter volume, reduced regional blood flow, and reduced regional glucose metabolism; neuroimaging and available post-mortem evidence further indicate that the impairments in AD+P, relative to AD subjects without psychosis, are localized to the neocortex rather than the medial temporal lobe, while neuropathologic studies provide consistent evidence of accelerated accumulation of hyperphosphorylated microtubule associated protein tau in AD+P (2).

The aim of this article is to review literature regarding the occurrence of different types of delusions in dementia and their treatment.

METHODS

The literature search was conducted using PubMed.

REVIEW OF LITERATURE

Delusional thoughts are common among patients with Alzheimer's disease (AD) and may be conceptually linked to memory deficits (inability to recall accurate information, which leads to inaccurate beliefs) and poor insight (inability to appreciate the illogic of beliefs). Delusions in AD are associated with dysfunc-

Sumanutosti mogu kompliciratи praktično sve moždane poremećaje. One mogu biti dramatične i bizarne. Primjer je takozvana sumanutost trudnoće. Pojava psihoze poput sumanutosti trudnoće može u nekim slučajevima biti obilježje demencije (7). Kod starijih osoba s demencijom često se javljaju psihotični simptomi kao što su sumanutosti, ali sadržaj sumanutosti u starijih osoba razlikuje se od sumanutosti kod mlađih pojedinaca (8).

U novijem pregledu literature u vezi sa sumanutošću krađe, najprevalentnije sumanutosti u starijih osoba, autor je naveo da razumijevanje podrijetla sumanutosti krađe – višestruki gubitci, pokušaji da se ti gubitci pripišu vanjskom izvoru, pokušaji ponovnog proživljavanja sretnije prošlosti – pomaže u osmišljavanju odgovora koji su utješni za pacijenta, a obraćanje pažnje podražajima koji potiču sumanutost pomaže u ograničavanju njenog javljanja; također, distres koji često prati sumanutost da je osoba pokradena može biti smanjen unaprjeđivanjem domova za starije osobe u pogledu rukovanja osobnim stvarima, korekcijom osjetilnih deficita i provođenjem aktivnosti koji skreću pažnju od usamljenosti i, nadalje, razumijevanje kako sumanuto mišljenje može nastati iz osjetilnih i kognitivnih deficita kritično je za empatično provođenje skrbi te također za smanjenje opterećenja skrbnika (8).

Istraživanja podržavaju da sumanutosti u AB i shizofreniji dijele etiologiju. Egzekutivni/frontalni deficiti su česti u oba poremećaja i nagovješćuju nastanak simptoma.

Persekutorne sumanutosti javljaju se rano tijekom bolesti i povezane su s neurokemijskim i neuropatološkim promjenama u frontostrijatnim krugovima, dok su sumanutosti pogrešnog prepoznavanja povezane s većim globalnim kognitivnim deficitom i uznapredovalom limbičkom patologijom. Nejasno je jesu li ova dva podtipa fenomenološki i biološki različita ili su dio kontinuuma pri čemu

tion in specific frontal and temporal cortical regions (6).

Delusions can complicate practically all brain disorders. They may be dramatic and bizarre. One example is the so-called delusion of pregnancy. Psychotic phenomena such as delusion of pregnancy may be a feature in some cases of dementia (7). The elderly with dementing illnesses often present with psychotic symptoms such as delusions, but the thematic content of delusions in the elderly differs from that of delusions expressed by younger individuals (8).

In a recently published literature review on the delusion of theft, the most prevalent delusion in the elderly, the author stated that understanding the origins of the delusion of theft - multiple losses, attempts at attributing such losses to an outside source, attempts at reliving a happier past - helps in devising responses that are comforting to the patient, and attention to stimuli that trigger the delusion helps to limit its occurrence; also, the distress that often accompanies the delusion of having been robbed can be decreased by nursing home improvements in the handling of personal possessions, by the correction of sensory deficits, and by the provision of activities that distract from loneliness. Furthermore, understanding that delusional thinking can arise from sensory and cognitive deficits is critical to empathic caregiving and the lessening of caregiver burden (8).

Research supports a shared aetiology for delusions in Alzheimer's disease (AD) and schizophrenia. Executive/frontal deficits are common to both disorders and predict emergent symptoms. Persecutory delusions occur early in the disease and are associated with neurochemical and neuropathological changes in frontostriatal circuits, while misidentification delusions are associated with greater global cognitive deficits and advanced limbic pathology. It is unclear whether the two subtypes are phenomenologically and biologically

se sumanutosti pogrešnog prepoznavanja sve izraženije manifestiraju kako se patološki proces nastavlja (9). O slučajevima *folie à deux*, psihotičnog poremećaja u kojem dva blisko povezana pojedinca dijele sličan sumanuti sustav, kod bolesnika s demencijom izvještava se vrlo rijetko (10). Erotomanija (također poznata kao Clerambaultov sindrom), poremećaj kod kojeg osoba ima sumanuto uvjerenje da je osoba višeg društvenog statusa zaljubljena u nju/njega, rijetko je opisan u starijih ljudi i premda su pogrešne interpretacije događaja česte u moždanih bolesti, osobito kod difuznih multifokalnih poremećaja, o erotomaniji se rijetko izvještava kod demencije (11). Otelov sindrom je psihotični poremećaj karakteriziran sumanutošću nevjere ili ljubomore. Uvjerenja o partnerovoj nevjeri mogu stvoriti sadržaj psihopatološkog fenomena kao što je sumanutost. Sumanuta ljubomora je čest problem kod demencije (12). Kapgrasov sindrom je rijedak psihijatrijski poremećaj. U početku je Kapgrasov sindrom opisan u paranoidnoj shizofreniji i shizoafektivnim poremećajima, ali je opisan i u neurodegenerativnim bolestima kao što su AB i Lewy body demencija (13).

Brojni psihijatrijski fenomeni kompliciraju demenciju (14). Psihoza u AB je česta i problematična; utjecaj na kvalitetu života u pacijenata kao i u skrbnika je visok te je izražena zabrinutost u pogledu učinkovitosti i sigurnosti tretmana lijekovima. Stoga je identificiranje rizičnih čimbenika koji imaju važnu ulogu u nastanku psihoze obvezno za prevenciju ovog kliničkog stanja. Novi dokazi ukazuju da kolinergički sustav može biti povezan ne samo s pojavom kognitivnog oštećenja, već i s nastankom simptoma psihoze (15). Otprilike 60 - 90 % bolesnika s AB razvije neuropsihijatrijske simptome (NPS) (kao što su halucinacije, sumanutosti, agitacija/agresivnost, disforija/depresija, anksioznost, iritabilnost, dezinhibicija, euforija, apatija, aberantno motoričko

distinct or are part of a continuum, in which misidentification delusions manifest increasingly as the pathological process extends (9). Cases of Folie à deux, a psychotic disorder in which two closely associated individuals share a similar delusional system, involving patients with dementia, are reported quite infrequently (10). Erotomania (also known as de Clerambault's syndrome), a disorder in which an individual has a delusional belief that a person of a socially higher standing falls in love with them, has rarely been described in older people, and although misinterpretation of events is common in brain disease, especially with diffuse or multifocal disorders, erotomania has rarely been reported in dementia (11). Othello syndrome is a psychotic disorder characterized by a delusion of infidelity or jealousy. Convictions about the partner's infidelities may form the content of psychopathological phenomena, such as delusions. Delusional jealousy is a frequent problem in dementia (12).

The Capgras syndrome (CS) is a rare psychiatric disorder. Initially, CS was described in paranoid schizophrenia and schizoaffective disorders, but has also been reported in neurodegenerative diseases such as AD and Lewy body dementia (13).

A number of psychiatric phenomena complicate dementia (14). Psychosis in AD is common and troublesome; the impact on the quality of life of both patients and caregivers is high and drug treatments raise concern in terms of both efficacy and safety. Therefore, identifying the risk factors that play an important role in the onset of psychosis is mandatory for the prevention of this clinical condition. New evidence suggests that the cholinergic system may be connected not only with the onset of cognitive impairment, but even with the genesis of psychosis symptoms (15). Approximately 60-90% of patients with AD develop neuropsychiatric symptoms (NPS) (such as hallucinations, delusions, agitation/aggres-

ponašanje, poremećaji spavanja, promjene apetita i hranjenja ili promijenjeno seksualno ponašanje) te se smatra da su ove nekognitivne promjene u ponašanju izazvane anatomskim i biokemijskim promjenama u mozgu i povezane su, djelomično, s kolinergičkom deficijencijom; inhibitori kolinesteraze mogu smanjiti pojavu NPS-a i imaju ulogu u njihovom liječenju – ovi lijekovi mogu odgoditi započinjanje ili smanjiti potrebu za drugim lijekovima kao što su antipsihotici (16). Sumanutosti su često susretani simptomi u pacijenata s AB i mogu dovesti do značajnog morbiditeta. U članku o kliničkim istraživanjima s fokusom na tretman sumanutosti u bolesnika s AB da bi se utvrdila razina dokaza za tretman, identificirane su tri glavne kategorije tretmana: atipični antipsihotici, inhibitori kolinesteraze i ostali različiti tretmani. Zaključeno je da su svi oblici tretmana bili učinkoviti, premda je najveća težina dokaza postojala za risperidon i donepezil.

Nuspojave su zabilježene kod svih oblika tretmana i uključivale su somnolenciju i ekstrapiramidne učinke za antipsihotike, dok su gastrointestinalni učinci imali veću prevalenciju u istraživanjima koja su uključivala inhibitore kolinesteraze (17).

Analiza sumanutosti i halucinacija treba ispitati alternativne etiologije, uključujući pogrešnu dijagnozu i nesporazum, pogrešno tumačenje stvarnosti zbog kognitivnih gubitaka, osjetilne deprivacije i gubitak vida, neodređenih senzacija, delirija i medicinskih uzroka.

Nefarmakološki tretmani učestalo proizlaze iz etiologije kao što su poboljšanje osjetilnih funkcija putem slušnih pomagala ili naočala, provođenje stimulacije, mijenjanje ranijih situacija kod kojih postoji sklonost pogrešnom tumačenju (npr. odrazi u prozorima), ili izbjegavanje pogrešnog tumačenja (npr. osiguravanjem da je odgovarajući objekt dostupan te da nema osjećaja gubitka ili pokradenosti) (18).

sion, dysphoria/depression, anxiety, irritability, disinhibition, euphoria, apathy, aberrant motor behaviour, sleep disturbances, appetite and eating changes, or altered sexual behaviour) and these noncognitive behavioural changes are thought to result from anatomical and biochemical changes within the brain, and have been linked, in part, to cholinergic deficiency; cholinesterase inhibitors may reduce the emergence of NPS and have a role in their treatment - these agents may delay initiation of, or reduce the need for, other drugs such as antipsychotics (16). Delusions are commonly encountered symptoms in patients with AD and may lead to significant morbidity. In an article that reviewed clinical trials focusing on the management of delusions in patients with AD to determine the level of evidence for treatment, three main categories of treatment were identified: atypical antipsychotics, cholinesterase inhibitors, and other miscellaneous treatments. It was concluded that all forms of treatment were effective although the greatest burden of evidence existed for risperidone and donepezil. Side effects were noted in all forms of treatment and included somnolence and extrapyramidal effects for antipsychotic medications, whereas gastrointestinal effects were more prevalent in studies involving cholinesterase inhibitors (17). An analysis of delusions and hallucinations must examine alternative etiologies, including misdiagnosis and misunderstanding, the misinterpretation of reality due to cognitive losses, sensory deprivation and vision loss, ambiguous sensations, and delirium and medical causes. Nonpharmacologic treatments frequently follow directly from etiology, such as improving the sensory function via hearing aids or eyeglasses, providing stimulation, changing previous situations prone to misinterpretation (e.g. reflections in windows), or avoiding misinterpretations (e.g. ensuring that an equivalent object is available so there is no sense of loss or theft) (18).

ZAKLJUČCI

Podatci iz literature pokazali su da se kod osoba s demencijom često javljaju psihotični simptomi kao što su sumanutosti, ali su također pokazali razlike u učestalosti različitih tipova deluzija u demenciji. Osim farmakoterapije, bolje razumijevanje etiologije pogrešnog tumačenja stvarnosti (zbog kognitivnih gubitaka, osjetilne deprivacije i gubitka vida, itd.) pokazuje važnost nefarmakoloških oblika liječenja koji često proizlaze izravno iz etiologije ovakvih simptoma. Daljnja istraživanja potrebna su za stjecanje boljeg razumijevanja etiologije sumanutosti u osoba s demencijom te za pronalaženje učinkovitog liječenja.

CONCLUSIONS

The findings of the literature review showed that people with dementia often present with psychotic symptoms such as delusions but also revealed differences in frequencies of different types of delusions in dementia. Apart from pharmacological treatment, a better understanding of the etiology of misinterpretation of reality (due to cognitive losses, sensory deprivation, and vision loss, etc.) reveals the importance of nonpharmacologic treatments that frequently follow directly from the etiology of such symptoms. Further investigations are necessary for a better understanding of the etiology of delusions in people with dementia, as well as finding effective treatment.

LITERATURA/*REFERENCES*

1. Ismail Z, Nguyen MQ, Fischer CE, Schweizer TA, Mulsant BH, Mamo D. Neurobiology of delusions in Alzheimer's disease. Curr Psychiatry Rep 2011; 13(3): 211-8. doi: 10.1007/s11920-011-0195-1.
2. Murray PS, Kumar S, Demichele-Sweet MA, Sweet RA. Psychosis in Alzheimer's disease. Biol Psychiatry 2014; 75(7): 542-52. doi: 10.1016/j.biopsych.2013.08.020.
3. Cipriani G, Danti S, Vedovello M, Nuti A, Lucetti C. Understanding delusion in dementia: a review. Geriatr Gerontol Int 2014; 14(1): 32-9. doi: 10.1111/ggi.12105.
4. Shah C, DeMichele-Sweet MA, Sweet RA. Genetics of psychosis of Alzheimer disease. Am J Med Genet B Neuropsychiatr Genet 2017; 174(1): 27-35. doi: 10.1002/ajmg.b.32413.
5. Bassiony MM, Lyketsos CG. Delusions and hallucinations in Alzheimer's disease: review of the brain decade. Psychosomatics 2003; 44(5): 388-401.
6. Sultzer DL, Leskin LP, Melrose RJ, Harwood DG, Narvaez TA, Ando TK, *et al*. Neurobiology of delusions, memory, and insight in Alzheimer disease. Am J Geriatr Psychiatry 2014; 22(11): 1346-55. doi: 10.1016/j.jagp.2013.06.005.
7. Cipriani G, Di Fiorino M.Delusion of pregnancy: an unusual symptom in the context of dementia. Am J Alzheimers Dis Other Dem 2015; 30(4): 341-5. doi: 10.1177/1533317514549412.
8. Seeman MV. Understanding the delusion of theft. Psychiatr Q 2018; 89(4): 881-9. doi: 10.1007/s11126-018-9588-1.
9. Reeves SJ, Gould RL, Powell JF, Howard RJ. Origins of delusions in Alzheimer's disease. Neurosci Biobehav Rev 2012; 36(10): 2274-87. doi: 10.1016/j.neubiorev.2012.08.001.
10. Cipriani G, Abdel-Gawad N, Danti S, Di Fiorino M. A contagious disorder: Folie à deux and dementia. Am J Alzheimers Dis Other Dem 2018; 33(7): 415-22. doi: 10.1177/1533317518772060.
11. Cipriani G, Logi C, Di Fiorino A. A romantic delusion: de Clerambault's syndrome in dementia. Geriatr Gerontol Int 2012; 12(3): 383-7. doi: 10.1111/j.1447-0594.2012.00850.x.
12. Cipriani G, Vedovello M, Nuti A, di Fiorino A. Dangerous passion: Othello syndrome and dementia. Psychiatry Clin Neurosci 2012; 66(6): 467-73. doi: 10.1111/j.1440-1819.2012.02386.x.
13. Cannas A, Meloni M, Mascia MM, Solla P, Cocco L, Muroni A *et al*. Capgras syndrome in Parkinson's disease: two new cases and literature review. Neurol Sci2017; 38(2): 25-31. doi: 10.1007/s10072-016-2765-9.
14. Flint AJ. Delusions in dementia: a review. J Neuropsychiatry Clin Neurosci. 1991 Spring; 3(2): 121-30.
15. Cancelli I, Beltrame M, D'Anna L, Gigli GL, Valente M. Drugs with anticholinergic properties: a potential risk factor for psychosis onset in Alzheimer's disease? Expert Opin Drug Saf 2009; 8(5): 549-57. doi: 10.1517/14740330903099636.
16. Cummings J, Lai TJ, Hemrungrojn S, Mohandas E, Yun Kim S, Nair G *et al*. Role of donepezil in the management of neuropsychiatric symptoms in Alzheimer's disease and dementia with Lewy bodies. CNS Neurosci Ther 2016; 22(3): 159-66. doi: 10.1111/cns.12484.
17. Fischer C, Bozanovic R, Atkins JH, Rourke SB. Treatment of delusions in Alzheimer's disease-response to pharmacotherapy. Dement Geriatr Cogn Disord 2006; 22(3): 260-6.
18. Cohen-Mansfield J. Nonpharmacologic interventions for psychotic symptoms in dementia. J Geriatr Psychiatry Neurol 2003; 16(4): 219-24.

Pristup liječenju Alzheimerove bolesti

/ Treatment Approach to Alzheimer's Disease

Aida Križaj Grden[1], Ninoslav Mimica[1,2]

[1]Klinika za psihijatriju Vrapče, Referentni centar Ministarstva zdravstva Republike Hrvatske za Alzheimerovu bolest i psihijatriju starije životne dobi, Zagreb, [2] Sveučilište u Zagrebu, Medicinski fakultet, Zagreb, Hrvatska

/ [1]*University Psychiatric Hospital Vrapče, Referral Centre for Alzheimer's disease and Old Age Psychiatry of the Ministry of Health, Zagreb,* [2]*University of Zagreb, School of Medicine, Zagreb, Croatia*

Alzheimerova bolest (AB) je neurodegenerativna bolest mozga i najčešći oblik demencije. Radi se o sindromu sa progresivnim gubitkom kognitivnih funkcija popraćenom ponašajnim i psihičkim simptomima. Nakupljeni β-amiloid i neurofibrilarni snopići implicirani su u nastanku funkcionalnih i neurodegenerativnih promjena koje završavaju smrću stanice. Etiološko liječenje zasad ne postoji. Aktualne mogućnosti farmakološkog liječenja sastoje se od dviju skupina lijekova: inhibitori kolinesteraze (donepezil, galantamin, rivastigmin) i antagonisti NDMA receptora, koji su se pokazali učinkoviti u poboljšanju kognitivnih funkcija, pojedini i s utjecajem na biheviоralne simptome. Ni jedan od ovih lijekova ne mijenja tijek i ishod bolesti. Istražuju se nove supstancije koje ciljaju na metabolizam amiloida i tau proteina. Od neuromodulacijskih metoda najviše se istražuju rTMS i tDCS, koji su pokazali pozitivne učinke na kognitivne funkcije. Kognitivna stimulacija također ima pozitivne rezultate pa se sve više istražuju učinci neuromodulatorskih metoda liječenja kombiniranih s kognitivnim vježbama, što je u praksi moguće putem sustava NeuroAD™

/ Alzheimer's disease (AD) is a neurodegenerative brain disorder and the most common type of dementia. AD is a syndrome leading to progressive loss of cognitive functions, often followed by behavioural and psychological symptoms. Amyloid plaques and neurofibrillary tangles are implicated in functional and neurodegenerative changes leading to neuronal death. A curative treatment does not exist. Pharmacological treatments include cholinesterase inhibitors (donepezil, galantamine, rivastigmine) and NDMA receptor antagonists, which have been shown to improve cognitive functions and some of them may also have positive effects on behavioural symptoms. None of these drugs effect the course and outcome of the disease. New drugs that can interfere with β-amyloid and tau protein metabolism are being researched. Neuromodulator methods of treatment such as TMS and tDCS are being researched and have shown positive effects on cognitive functions. Cognitive stimulation has also shown positive effects so it is not surprising that more research is being aimed at studying the combined effects of neuromodulator treatment and cognitive stimulation, which is in practice possible using the NeuroAD™ system.

ADRESA ZA DOPISIVANJE / *CORRESPONDENCE*:
Aida Križaj Grden, dr. med.
Klinika za psihijatriju Vrapče
Bolnička cesta 32
10090 Zagreb, Hrvatska
E-pošta: aidakrizaj@hotmail.com

KLJUČNE RIJEČI / *KEY WORDS*:
Alzheimerova bolest / *Alzheimer's disease*
Demencija / *Dementia*
Farmakološko liječenje / *Pharmacological Treatment*
Kognitivna stimulacija / *Cognitive Stimulation*
tDCS / *tDCS*
TMS / *TMS*

TO LINK TO THIS ARTICLE: https://doi.org/10.24869/spsih.2019.325

UVOD

Alzheimerova bolest (AB) neurodegenerativna je bolest mozga i najčešći oblik demencije koja predstavlja 60-70% svih slučajeva demencije. Oko 50 milijuna ljudi diljem svijeta boluje od ove bolesti, a projekcije su da će se ove brojke utrostručiti do 2050. godine (1,2), stoga AB postaje jedan od javnozdravstvenih prioriteta (2). Radi se o sindromu s progresivnim gubitkom kognitivnih funkcija; s deterioracijom pamćenja, spacijalne i temporalne orijentacije, jezičnih funkcija, sposobnosti učenje i komuniciranja (3) uz promjene u ponašanju i čestim popratnim psihičkim simptomima poput depresije, anksioznosti i deluzija. Prevalencija psihičkih simptoma povećava se s trajanjem bolesti (4) i u konačnici te osobe postaju potpune ovisne o okolini.

Etiopatofiziologija AB nije poznata; najraširenija je hipoteza amiloidne kaskade; βAmiloid se nakuplja stvarajući ekstracelularne amiloidne plakove. Amiloidni plakovi pak dovode do hiperfosforilacija tau proteina, koji su integralni dio neurofibrilarnih snopića, upalnih promjena, ekscitotoksičnost i neuronalne smrti (5). Druge hipoteze na prvo mjesto u patofiziologiji AB smještavaju neurofibrilarne snopiće koji dovode do destabilizacije aksona, gubitka sinaptičkih veza uz konačnu strukturnu degeneraciju neurona (6). U patofiziologiji AB sve se više pažnje pridaje vaskularnim učincima (7) .

METODE LIJEČENJA

Farmakološko liječenje

Patofiziološke promjene mozga u AB dovode do poremećaja neurotransmiterskih sustava osobito kolinergičkog sustava, koji ima bitnu ulogu u raznim kognitivnim procesima (8).

Iz ovih spoznaja proizišla su četiri lijeka koji djeluju kao inhibitori kolinesteraze (takrin, donepezil, rivastigmin, galantamin), a njihovo

INTRODUCTION

Alzheimer's disease (AD) is a neurodegenerative brain disorder and the most common form of dementia contributing to 60-70% of all cases. It is estimated that 50 million people around the world suffer from AD, and this number is thought to triple by the year 2050 (1,2), making AD a public health priority (2). AD is a syndrome leading to progressive loss of cognitive functions, with a deterioration of memory, spatial and temporal orientation, language functions, and the ability to learn and communicate (3). This is often followed by behavioural and psychological symptoms such as depression, anxiety, and delusions. The prevalence of psychiatric symptoms increases with disease duration (4). The disease ultimately leads to complete caregiver dependence.

The etiopathophysiology of AD is not understood; the amyloid cascade hypothesis is the most widespread hypothesis. β amyloid accumulation leads to the formation of extracellular amyloid plaques. Plaques lead to hyperphosphorylation of tau protein, which forms intraneural neurofibrillary tangles, neuro-inflammatory processes, excitotoxicity, and neuronal death (5). In other hypotheses, neurofibrillary tangles are central in the pathophysiology of AD leading to axonal destabilization, synaptic loss, and finally structural degeneration of neurons (6). Vascular components in the pathophysiology of AD are also being paid more attention (7).

METHODS OF TREATMENT

Pharmacological treatment

Pathophysiological brain changes in AD lead to neurotransmitter abnormalities, especially in the cholinergic system, which has an important role in cognitive processes (8).

This knowledge has led to the development of four different cholinesterase inhibitors

djelovanje je simptomsko i ne mijenja prirodan tijek i ishod bolesti. Takrin, kao lijek s nepraktičnim režimom davanja (4 puta/dan) i najnepovoljnijim profilom nuspojava, gotovo se više i ne koristi u kliničkoj praksi.

Inhibitori kolinesteraze

Donepezil

Rezultati Cochrane studije koja je uključivala 8257 pacijenata s blagom, umjerenom i teškom AB pokazali su statistički značajne učinke donepezila na kognitivne funkcije, ljestvice za procjenu dnevnih aktivnosti i na ljestvici kliničke procjene globalnih promjena (*Clinician -Rated Global Impression of Change Scale*), ali bez utjecaja na bihevioralne simptome. Obje doze (5 i 10 mg) su se pokazale učinkovite uz nešto više nuspojava kod primjene većih doza, ponajprije gastrointestinalnih (9).

Rivastigmine

Rezultati studije Cochrane pokazali su učinkovitost rivastigmina kod blage do umjerene AB prigodom primjene visokih doza (6 – 12 mg/dan), sa statistički značajnim poboljšanjem kognitivnih funkcija bez značajnijih učinka na bihevioralne simptome. Nuspojave kod primjene viših doza bile su učestalije, ponajprije gastrointestinalne, ali su se javljale i glavobolje i sinkope. Ispitan je rivastigmin u obliku transdermalnog flastera; manji flaster, manje doze bio je jednako učinkovit kao veći flaster i peroralni oblik lijeka ekvivalentne dnevne doze, uz manje nuspojava (10).

Galantamine

Učinci galantamina su također analizirani studijom Cochrane koja je uključivala 6805 osoba; rezultati su pokazali statistički značajno poboljšanje kognitivnih funkcija kod blagog do umjerenog stupnja demencije, ali bez korelacije s dozom. Nuspojave su slične kao i kod drugih inhibitora kolinesteraze (11).

(tacrine, donepezil, rivastigmine, galantamine), whose effects are not disease-altering but only symptomatic. The use of tacrine has all but been abandoned in practise due to its profile of adverse effects and impractical dosing schedule (4 times daily).

Cholinesterase inhibitors

Donepezil

The results of a Cochrane study, which included 8257 people with mild, moderate, and severe AD showed statistically significant improvement in cognitive functions, activities of daily living, and clinician-rated global impression of change scale, with no significant effects on behavioural symptoms. Both doses (5 mg and 10 mg) were effective, with more adverse effects reported for the higher dose, mainly gastrointestinal (9).

Rivastigmine

According to the results of a Cochrane study, rivastigmine has led to statistically significant improvement in cognitive functions in patients with mild to moderate AD when administered in high doses (6–12 mg). It had no significant effect on behavioural symptoms. Adverse effects were quite common with high doses, mostly gastrointestinal symptoms, although headaches and syncopes were also reported. The rivastigmine transdermal patch was also tested; a smaller patch with a lower dosage was as effective as both the bigger patch (higher dosage) and the peroral form of the medicine, which was given in the equivalent daily dose but had less adverse effects (10).

Galantamine

The effects of galantamine were also analysed in a Cochrane study which included 6805 subjects, and the results showed a statistically significant improvement in cognitive functions in mild to moderate AD, with no dose-effect correlation. The side effects were similar to those of other cholinesterase inhibitors (11).

Antagonisti NMDA receptora

Memantin

Memantin djeluje kao nekompetativni antagonist N-metil-d-aspartat (NMDA) glutaminskih receptora. Glutamat je glavni ekscitatorni neurotransmitor mozga koji djeluje putem NMDA receptora s ključnom ulogom u funkcijama sinaptičke plastičnosti. Aktivacija sinaptičkih NMDA receptora kritična je za preživljavanje neurona (12), ali pretjerana glutaminergička stimulacija dovodi do ekscitotoksičnosti uz posljedičan gubitak sinaptičke funkcije i neuronalne smrti (13). Ovi procesi smatraju se etiološki povezanima s nastankom neurodegenerativnih promjena u AB (14).

Do vezanja memantina za receptore dolazi zbog povišene koncentracije glutamata u sinaptičkoj pukotini, kao što je slučaj u AB. Memantin djeluje nekompetitivnim vezanjem na ekstracelularne NMDA receptore za koje ima slab afinitet pa ubrzo nakon vezanja uslijedi disocijacija veze, posljedično tomu onemogućena je dugotrajna blokada i njeni negativni učinci na učenje i pamćenje (15).

Prema rezultatima studije Cochrane iz 2006. godine zaključeno je da šestomjesečna primjena memantina kod osoba s umjereno teškim i teškim stupnjem demencije ima blagotvorni učinak na kognitivne funkcije, ponašajne simptome i u ljestvicama procjene dnevnih aktivnosti. Kod pacijenata s blagom do umjerenom AB pozitivne promjene u kognitivnim funkcijama bile su jedva detektibilne, bez ikakvih poboljšanja ponašajnih simptoma i u ljestvicama procjene dnevnih aktivnosti. U pacijenata s vaskularnom demencijom nisu detektirana poboljšanja. Zaključeno je da pacijenti na terapiji memantinom rjeđe razvijaju agitaciju (16).

Meta-analitička studija iz 2017. godine uspoređivala je terapijski učinak i sigurnost primjene monoterapije donepezilom s kombiniranom terapijom donepezilom i memantinom u osoba s umjerenom i teškom AB. Analizirane su kogni-

NMDA receptor antagonists

Memantine

Memantine is a non-competitive N-methyl-d-aspartate (NMDA) glutamine receptor antagonist. Glutamate is the brain's main excitatory neurotransmitter, it binds to NMDA receptors and plays a crucial role in functions of synaptic plasticity. The activation of synaptic NMDA receptors is critical for the survival of neurons (12), but excessive glutaminergic stimulation leads to excitotoxicity which causes loss of synaptic function and neuronal death (13). These processes are believed to be a part of the pathogenesis leading to neurodegenerative changes in AD (14).

Memantine binds to receptors when high concentrations of glutamate are present in the synaptic fissure, as is the case in AD (15). Memantine binds to extracellular NMDA receptors non-competitively, and its low affinity for these receptors allows rapid dissociation and prevents prolonged receptor blockade, which has a negative impact on learning and memory (15).

According to the results of another Cochrane study from 2006, six months of treatment with memantine in subjects with moderate to severe AD had beneficial effects on cognitive functions, behavioural symptoms, and in activities of daily living (ADL). In mild to moderate AD the positive effects on cognitive functions were barely detectable, with no effect on behavioural symptoms and ADL. No detectable improvements were registered in subjects with vascular dementia. Patients receiving memantine were less likely to develop agitation (16).

A 2017 meta-analytic study compared the efficacy and safety between monotherapy of donepezil and combined therapy with donepezil and memantine in subjects with moderate and severe AD. The study analysed cognitive functions, behavioural and psychological symptoms, and global functions. The results showed the combination therapy to be superior in all domains, without significant adverse effects (16).

tivne funkcije, ponašajni i psihički simptomi te mjere globalnih funkcija. Rezultati su pokazali bolji učinak kombinirane terapije u svim analiziranim domenama, bez razvoja značajnih nuspojava (17).

Meta-analitička studija iz 2018. godine uspoređivala je učinkovitost i sigurnost pojedinih inhibitora kolinesteraze i memantina. Prema spomenutoj studiji najbolji učinak na poboljšanje kognitivnih funkcija kod blage do umjerene AB postignut je (pojedinačno) donepezilom u dozi od 10 mg i galantaminom u dozi 24 mg ili 32 mg/dan. Kod umjerene do teške demencije najučinkovitija je kombinacija 20 mg memantina sa 10 mg donepezila. Memantin je imao najbolji profil tolerancije. Nisu uočeni učinci na bihevioralne simptome (18).

Supstancije s djelovanjem na β-amiloid i tau protein

Jedan od glavnih ciljeva u istraživanjima AB je bolje razumijevanje patologije bolesti i pronalaženje terapije koja će utjecati na tijek i ishod bolesti. Među supstancijama koje se istražuju su one koje djeluju na β-amiloid (smanjena proizvodnja, smanjena agregacija ili povećan klirens pomoću imunoterapije), te razne molekule koje djeluju na patološke procese vezane za tau protein, uključujući one koje inhibiraju tau fosforilaciju (litij i valproat). Istražuje se učinkovitost i sigurnost aktivne i pasivne tau imunizacije (19,20).

Neuromodulacijske metode liječenja

Transkranijska magnetska stimulacija (TMS)

Transkranijskna magnetska stimulacija (TMS) je sigurna, neinvazivna, stimulacija mozga s neuromodulacijskim i terapijskim učinkom koji je duži od samog trajanja stimulacije. Ovisno o primijenjenim frekvencijama i intenzitetima stimulacije TMS utječe na neuronalnu ekscita-

A 2018 meta-analytic study compared the safety and effectiveness of cholinesterase inhibitors and memantine. According to this study, the most effective approach to improving cognitive functions in mild to moderate AD was (individually) donepezil 10 mg and galantamine 24 mg or 32 mg daily. For moderate to severe AD the most effective therapy was a combination of memantine 20 mg and donepezil 10 mg. Memantine had the best acceptability profile. No effects on behavioural symptoms were registered (18).

β-amyloid and tau protein targeting therapy

Trying to better understand the underlying pathology of AD and find disease-altering treatments has always been the main goal in research. Some of the substances being studied act upon β-amyloid (lowered production, lowered aggregation, or increased clearance with the use of immunotherapy), while others interfere with tau protein pathology, including inhibition of tau phosphorylation (lithium and valproate). The efficacy and safety of active and passive tau immunization is also being researched (19,20).

Neuromodulatory treatment

Transcranial magnetic stimulation (TMS)

Transcranial magnetic stimulation (TMS) is a safe, non-invasive stimulation of the brain with neuromodulator effects and therapeutic responses that outlast the stimulation period. Depending on the frequency and intensity of TMS stimulation, excitatory neuronal effects are achieved not only in the stimulated areas but also in other interconnected brain regions (21). High frequencies have excitatory effects whereas low frequencies have inhibitory effects (22). TMS is approved for the treatment of depression, but its therapeutic effects are being

bilnost ne samo stimulirane moždane regije već i drugih međusobno povezanih moždanih regija (21). Visoke frekvencije imaju ekscitacijski, a niske frekvencije inhibicijski učinak (22). TMS je odobren za liječenje depresije, ali se istražuju mogućnosti korištenja u liječenju mnogih neuroloških i psihijatrijskih bolesti. Kod demencija TMS se koristi u istraživačke svrhe direktnim ispitivanjima kortikalne ekscitabilnosti kako bi se bolje razumjela patofiziologija bolesti te kao alat u dijagnosticiranju i diferencijaciji između starenja zdravog mozga, blagog kognitivnog poremećaja (engl. *Mild Cognitive Impairment* / MCI) i AB te u diferencijaciji različitih vrsta demencija (23). U ovom osvrtu bavimo se terapijskim mogućnostima TMS-a.

Studije su pokazale da korištenje visokih frekvencija repetitivne transkranijske magnetske stimulacije (rTMS) u stimulaciji dorzolateralnog prefrontalnog korteksa (DLPFK) kod osoba s AB i MCI dovodi do značajnih pozitivnih promjena u kognitivnim funkcijama ispitanih nizom neuropsihologijskih testova (24,25).

U jednoj studiji uspoređivali su se učinci stimulacije DLPFK visokim i niskim frekvencijama rTMS-a na kortikalnu ekscitabilnost i kognitivne funkcije. Značajno poboljšanje registrirano je kod tretiranih visokim frekvencijama rTMS-a, s razlikama u učinkovitosti među pojedinim podskupinama; naime kod pacijenata s blagom/umjerenom AB registrirana su poboljšanja, dok kod onih s uznapredovalom AB nije uočeno značajno poboljšanje (24).

Tri studije istih autora (Cotell i sur.) istraživale su utjecaj rTMS na imenovanje i jezične funkcije kod pacijenata oboljelih od AB. Korištene su visoke frekvencije rTMS-a nad DLPFC. U prvoj studiji uočeni su značajni učinci na imenovanje pokreta, ali ne na imenovanju objekta (26). U drugoj studiji dobiveni su isti rezultati, ali samo kod pacijenata s blažim stupnjem AB, dok su i kod onih s umjerenim i teškim stupnjem uočena poboljšanja u imenovanju pokreta i objekta (27). U trećoj, drugačije koncipiranoj studiji, researched in many other neurological and psychiatric disorders. In the research of dementia, TMS is being used as a neuroscientific tool for studying cortical excitability in order to better understand the pathophysiology of AD, as a diagnostic tool for differentiating between normal aging, mild cognitive impairment (MCI), and AD, and differentiating between different types of dementia (23). Here we discuss the therapeutic effects of TMS.

Studies show that stimulation of the dorsolateral prefrontal cortex (DLPFC) with high frequency repetitive transcranial magnetic stimulation (rTMS) in subjects with AD and MCI leads to significant positive changes in cognitive functions measured by a battery of neuropsychological tests (24,25).

One study compared the effects of high versus low frequency rTMS, applied over the DLPFC, on cortical excitability and cognitive functions. Significant improvements were seen in those stimulated with high frequency rTMS. Differences in efficacy were registered between individual subgroups; significant improvements were seen in subjects with mild/moderate AD, whereas in those with severe AD there were no significant improvements (24).

Three studies by the same group of authors (Cotell *et al.*) studied the effects of rTMS on naming and language functions in patients with AD using high frequency rTMS applied to the DLPFC. In the first study, significant improvements in action naming were seen, but were absent in object naming (26). The second study had the same results as the first for subjects with mild AD, while those with moderate and severe AD showed an improvement in both action and object naming (27). The third study, conceptually different from the previous two, showed no improvement in naming but rather in auditory sentence comprehension, with effects still present at 8 weeks after treatment (28).

A number of studies examined the effects of high frequency rTMS applied in combination

zultati nisu pokazali poboljšanja u imenovanju, već u auditornom razumijevanju rečenica. Ove promjene bile su prisutne i 8 tjedana nakon završetka tretmana (28).

Niz studija ispitivalo je učinkovitost visokih frekvencija rTMS-a u kombinaciji s kognitivnim vježbama koristeći sustav NeuroAD™ (29-31). U ovim studijama stimuliralo se šest moždanih regija; lijevi i desni DLPFK (prosuđivanje, egzekutivne funkcije, dugotrajno pamćenje), Brokin i Wernickeov centar (jezične funkcije), te lijevi i desni parijetalni somatosenzorni asocijativni korteks (spacijalna orijentacija, praksija). Moždane regije su individualno lokalizirane pomoću MR mozga, sa ciljano pripremljenim kognitivnim zadatcima koji odgovaraju pojedinoj regiji. U svim studijama neuropsihologijskim testovima (ljestvicama) potvrđeno je značajno poboljšanje ispitanih kognitivnih funkcija (32-37).

Jedna skupina autora istražila je učinak rTMS-a kao adjuvantne terapije u liječenju bihevioralnih i psihičkih simptoma kod pacijenata s AB. Rezultati su pokazali značajno poboljšanje kognitivnih funkcija, bihevioralnih i psihičkih simptoma u skupini kod koje je uz male doze antipsihotika primijenjen rTMS (38).

Transkranijska stimulacija istosmjernom strujom (tDCS)

U transkranijskoj stimulaciji istosmjernom strujom (tDCS) aplicira se električna struja jakosti 1 – 2 mA kroz dvije ili više elektroda smještenih na tjemenu s modulirajućim učinkom na neuronalnu aktivnost ciljane moždane regije. Anodalni tDCS povećava kortikalnu ekscitabilnost mozga dok ju katodalni tDCS smanjuje (39). Smatra se da tDCS ima modulacijski učinak na kognitivne funkcije u mnogim neuropsihijatrijskim bolestima (40).

U nekoliko studija malih uzoraka ispitivan je učinak tDCS na kognitivne funkcije pacijenta s AB. U jednoj od njih bilateralno je stimulirana temporoparijetalna regija mozga a rezultat je bio poboljšanje memorije prepoznavanja (41).

with cognitive training using the NeuroAD™ system (29-31). In these studies, six brain regions were stimulated: left and right DLPFC (reasoning, executive functions, long-term memory), Brocca and Wernick's area (language function), and the right and left parietal somatosensory associative cortex (spatial orientation, praxis). The brain regions were individually mapped using brain MR and the cognitive training tasks were prepared to match the stimulated brain regions. The results of these studies showed significant improvement of cognitive functions, measured using a battery of neuropsychological tests (32-37).

One group of authors studied the effects of high frequency rTMS as adjunctive treatment for behavioural and psychological symptoms in patients with AD. The results showed a significant improvement of cognitive functions and behavioural and psychological symptoms in those patients who received rTMS along with small doses of antipsychotics (38).

Transcranial direct current stimulation (tDCS)

In transcranial direct current stimulation (tDCS) an electric current of 1–2 mA is passed through two or more electrodes placed on the scalp, modulating neuronal activity of the stimulated brain region. Anodal tDCS increases cortical excitability whereas cathodal tDCS decreases it (39). It is believed that tDCS has a modulatory effect on cognitive functions in many neuropsychiatric disorders (40).

There are few studies of small sample sizes that have examined the effects of tDCS on cognitive functions in patients with AD. One such study used tDCS to bilaterally stimulate the temporoparietal brain region, with improvements in recognition memory (41).

The results of two other studies by the same group of researchers showed an improvement

Rezultati drugih dviju studija iste skupine istraživača navode poboljšanje memorije vizualnog prepoznavanja na zadatcima *Visual Recognition Memory* (VRM). Rezultati su održani tijekom 4 tjedna (42,43). U jednoj od najnovijih studija rezultati ukazuju na poboljšanje kognitivnih funkcija mjereno ljestvicom MMSE nakon višekratne primjene tDCS (44). Cotelli i sur. su ispitivali primjenu anodalnog tDCS nad DLPFK zajedno s individualiziranim kompjuteriziranim vježbama pamćenja ili motoričkim vježbama. Pacijenti su randomizirani tako da je jedna skupina primala tDCS + vježbe pamćenja, druga tDCS + motoričke vježbe, a treća placebo tDCS + vježbe pamćenja. Rezultati su pokazali poboljšanje pamćenja (asocijacije ime - lice) kod obje skupine koje su primali vježbe pamćenja (45).

U randomiziranoj placebo kontroliranoj studiji, u kojoj je primijenjen tDCS temporalno, autori Bystad i sur. nisu našli bitne razlike u neuropsihologijskim mjerama između aktivne i placebo skupine (46).

Kognitivna stimulacija

Rezultati recentne meta-analitičke studije, koja je uključivala 14 randomiziranih, placebo kontroliranih studija (731 osoba, 412 primalo kognitivnu stimulaciju) pokazali su da kognitivna stimulacija dovodi do poboljšanja kognitivnih funkcija mjereno ljestvicama ADAS-Cog i MMSE. Uočena su značajna poboljšanja u mjerama kvalitete života (QoL-AD), ali bez značajnijih promjena na ljestvici aktivnosti dnevnog života (ADL); bez utjecaja na raspoloženje i bihevioralne simptome (47). Cochrane meta-analitička studija iz 2012. godine imala je slične rezultate (48).

ZAKLJUČCI

Demencija je teška neurodegenerativna bolest koja zbog starenja populacije i sve veće pojavnosti postaje prioritetni javnozdravstveni problem. Etiopatofiziologija do danas nije jasna. Etiološko liječenje ne postoji. Antidementivi, koji uključu-

in visual recognition memory (VRM), and these results were retained for 4 weeks (42,43).

The results of a recent study showed improvements in cognitive functions measured by MMSE after multiple applications of tDCS (44). Cotelli and colleagues studied the application of anodal tDCS on the DLPFC combined with individualized computerized memory training or motor training. The patients were randomized into three groups: one group received tDCS + memory training, the second group received tDCS + motor training and the third placebo tDCS + memory training. The results showed improvement in memory (face-name association) in both groups receiving memory training (45).

In a randomized placebo-controlled study in which tDCS was applied temporally, Bystad *et al.* did not find significant differences in neuropsychological tests between the active and placebo groups (46).

Cognitive stimulation

The results of a recent meta-analytical study, which included 14 randomized controlled studies (731 subjects, 412 received cognitive stimulation), showed that cognitive stimulation leads to improved cognitive functioning as measured by ADAS-Cog and MMSE. Significant improvements were seen in Quality of Life assessment (QoL-AD) but without differences in the Activities of Daily Living (ADL) scale and with no benefits on mood and behavioural symptoms (47). A Cochrane meta-analytic study from 2012 showed similar results (48).

CONCLUSION

Dementia is a severe neurodegenerative disease. It has become a public health priority due to population ageing and increase in prevalence. The etiopathophysiology is still unknown. No etiological form of treatment exists. Antidementia drugs include cholinesterase inhibitors

ju inhibitore kolinesteraze i antagoniste NMDA receptora imaju simptomatski učinak, ali ne mijenjaju prirodan tijek i ishod bolesti. Trenutno se ispituju supstancije koje na razne načine djeluju na β-amiloid i tau proteine. Od neuromodulacijskih metode liječenja rTMS i tDCS su pokazali učinkovitost u poboljšanju kognitivnih funkcija, ali su, kao i kod drugih metoda liječenja, učinci vremenski ograničeni. U području neuromodulacijskog liječenja potrebna su daljnja standardizirana istraživanja na većim uzorcima. Premalo je randomiziranih placebo kontroliranih studija. Studije nisu standardizirane, velike su varijacije u metodologiji, kriterijima uključivanja, načinu praćenja i vremenu trajanja samih studija. Kognitivna stimulacija se pokazala učinkovitom u poboljšanju kognitivnih funkcija, ali bez bitnog utjecaja na druge simptome vezane uz AB (npr. raspoloženje, bihevioralni učinci).

and NMDA receptor antagonists which have only a symptomatic effect and do not change the course and outcome of the disease. Substances that effect β-amiloid and tau protein are being researched. Neuromodulator forms of treatment such as TMS and tDCS have been shown to improve cognitive functions, but as with all other forms of treatment are of limited duration. In the area of neuromodulation therapy there is a need for further standardized research studies with bigger sample sizes. There are not enough randomized placebo-controlled studies. Studies are not standardized; there is too much variation in methodology, inclusion criteria, follow-up methods, and study duration. Cognitive stimulation training also has positive effects on cognition but without much effect on other symptoms associated with AD (e.g. behavioural and mood changes).

LITERATURA/*REFERENCES*

1. Scheltens P, Blennow K, Breteler MM, de Strooper B, Frisoni GB, Salloway S i sur. Alzheimer's disease. Lancet 2016; 388(10043): 505-17.
2. World Health Organization. Dementia - A public health priority. Geneva: World Health Organization, 2012.
3. World health organization. The ICD-10 Classification of Mental and Behavioral Disorders: Clinical descriptions and Diagnostic Guidelines (Vol.1). Geneva: World Health Organization, 1991.
4. Steinberg M i sur. Point and 5-year period prevalence of neuropsychiatric symptoms in dementia: the Cache County Study. Int J Geriatr Psychiatry 2008; 23(2): 170-7.
5. Cummnings JL. Alzheimer's disease. N Engl J Med 2004; 351: 56-67.
6. Igbal K, Liu F, Gong CX, Alonso Adel C, Grundke-Igbal I. Mechanisms of tau-induced neurodegeneration. Acta Neuropathol 2009; 118 (1): 53-69.
7. Snowdon DA, Greiner LH, Mortimer JA, Riley KP, Greiner PA, Markesbery WR. Brain infarction and the clinical expression of Alzheimer disease - The Nun Study. JAMA 1997; 1277(1): 813-7.
8. Ferreira-Vieira TH, Silva FR, Ribeiro FM. Targeting the Cholinergic System. Curr Neuropharmacol 2016; 14 (1): 101-15.
9. Birks J, Harvey RJ. Donepezil for dementia due to Alzheimer's disease. Cochrane Database Syst Rev 2006; (1): CD00119.
10. Birks J, Grimley Evans J, Iakovidou V, Tsolaki M, Holt FE. Rivastigmine for Alzheimer's disease. 2009; (2): CD001191.
11. Loy C, Schneider L. Galantamine for Alzheimer's disease and mild cognitive impairment. Cochrane Database Syst Rev 2006; (1): CD001747.
12. Wang R, Reddy PH. Role of glutamate and NMDA receptors in Alzheimer's disease. J Alzheimers Dis 2017; 57(4): 1041-8.
13. Rothman SM, Olney JW. Glutamate and the pathophysiology of hypoxic-ischemic brain damage. Ann Neurol 1986; 19(2): 105-11.
14. Hynd MR, Scott HL, Dodd PR. Glutamate-mediated excitotoxicity and neurodegeneration in Alzheimer's disease. Neurochem Int 2004; 45(5): 583-95.
15. Folch J, Busquets O, Ettcheto M, Sanchez-Lopez E, Castro-Torres RD, Verdaguer E. Memantine for the treatment of dementia: A review on its current and future applications. J Alzheimers Dis 2018; 62(3): 1223-40.
16. McShane R, Areosa Sastre A, Minakaran N. Memantine for dementia. Cochrane Database Syst Rev 2006; (2): CD003154.
17. Chen R, Chan PT, Chu H, Lin YC, Chang PC, Chen CY i sur. Treatment effect between monotherapy of donepezil versus combination with memantine for Alzheimer disease: A meta-analysis. PloS One 2017; 12(8): e0183568.
18. Dou KX, Tan MS, Tan CC, Cao XP, Hou XH, Gou QH i sur. Comparative safety and effectiveness of cholinesterase inhibitors and memantine for Alzheimer's disease: a network meta-analysis of 41 randomized controlled trials. Alzheimer's Res Ther 2018; 10(1): 126.
19. Sultan S Al-Hamady M, Hesham Hafiz A, Mashhoor Al-Barakati A, Al-Huthali RK i sur. An update on treatment of Alzheimer disease - A literature review. Eur J Pharma Med Res 2018; 5(7): 9-18.

20. Congdon EE, Sigurdsson EM. Tau-targeting therapies for Alzheimer disease. Nat Rev Neurol 2018; 14(7): 399-415.
21. Chervyakov AV, Chernyavsky AY, Sinitsyn DO, Piradov MA. Possible mechanisms underlying the therapeutic effects of transcranial magnetic stimulation. Front Hum Neurosci 2015; 16(9): 303.
22. Murphy SC, Palmer LM, Nyffeler T, Muri RM, Larkum ME. Transcranial magnetic stimulation (TMS) inhibits cortical dendrites. Elife 2016; 18: 5.
23. Pennisi G, Ferri R, Lanza G, Cantone M, Pennisi M, Puglisi V i sur. Transcranial magnetic stimulation in Alzheimer's disease: a neurophysiological marker of cortical hyperexcitability. J Neural Transm (Vienna) 2011; 118(4): 587-98.
24. Ahmed MA, Darwish ES, Khedr EM, El Serogy YM, Ali AM. Effects of low versus high frequencies of repetitive transcranial magnetic stimulation on cognitive function and cortical excitability in Alzheimer's dementia. Neurology 2012; 259(1): 83-92.
25. Drumond Marra HL, Myczkowski ML, Maia Memoria C, Arnaut D, Leite Ribeiro P, Sardinha Mansur CG i sur. Transcranial magnetic stimulation to address mild cognitive impairment in the elderly: a randomized controlled study. Behav Neurol 2015; 2015: 287843.
26. Cotelli M, Manenti R, Cappa SF, Geroldi C, Zanetti O, Rossini PM i sur. Effect of transcranial magnetic stimulation on action naming in patients with Alzheimer disease. Arch Neurol 2006; 63(11): 1602-4.
27. Cotelli M, Manenti R, Cappa SF, Zanetti O, Miniussi C. Transcranial magnetic stimulation improves naming in Alzheimer disease patients at different stages of cognitive decline. Eur J Neurol 2008; 15(12): 1286-92.
28. Cotelli M, Calabria M, Manenti R, Rosini S, Zanetti O, Cappa SF i sur. Improved language performance in Alzheimer disease following brain stimulation. J Neurol Neurosurg Psychiatry 2011; 82(7): 794-7.
29. Mimica N, Križaj Grden A, Jukić V, Derksen R. NeuroAD™ System – New treatment approach in Alzheimer's disease. Neurol Croat 2016; 65(Suppl. 2): 125.
30. Križaj Grden A, Mimica N. Transkranijalna magnetska stimulacija - princip rada i klinička primjena u psihijatriji i neurologiji s posebnim osvrtom na Alzheimerovu bolest. Medix 2017; XXIII(126): 144-50.
31. Križaj Grden A, Mimica N. TMS - nova nada u liječenju Alzheimerove demencije. Neurol Croat 2018; 67(Suppl. 3): 57.
32. Rabey JM, Dobronevsky E, Aichenbaum S, Gonen O, Marton RG, Khaigrekht M. Repetitive transcranial magnetic stimulation combined with cognitive training is a safe and effective modality for the treatment of Alzheimer's disease: a randomized, double-blind study. J Neural Transm (Vienna) 2013; 120(5): 813-9.
33. Rabey JM, Dobronevsky E. Repetitive transcranial magnetic stimulation (rTMS) combined with cognitive training is a safe and effective modality for the treatment of Alzheimer's disease: clinical experience. J Neural Transm (Vienna) 2016; 123(12): 1449-55.
34. Bentwich J, Dobronevsky E, Aichenbaum S, Shorer R, Peretz R, Khaigrekht i sur. Beneficial effect of repetitive transcranial magnetic stimulation combined with cognitive training for the treatment of Alzheimer's disease: a proof of concept study. Neural Transm (Vienna) 2011; 118(3): 463-71.
35. Lee J, Choi BH, Oh E, Sohn EH, Lee AY. Treatment of Alzheimer's Disease with repetitive transcranial magnetic stimulation combined with cognitive training: a prospective, randomized, double-blind, placebo-controlled study. J Clin Neurol 2016; 12(1): 57-64.
36. Nguyen JP, Suarez A, Kemoun G, Meignier M, Le Saout E, Damier i sur. Repetitive transcranial magnetic stimulation combined with cognitive training for the treatment of Alzheimer's disease. Neurophysiol Clin 2017; 47(1): 47-53.
37. Zhao J, Li Z, Cong Y, Zhang Y, Tan M, Zhang H i sur. Repetitive transcranial magnetic stimulation improves cognitive function of Alzheimer's disease patients. Oncotarget 2017; 8(20): 33864-71.
38. Wu Y, Xu W, Liu X, Xu Q, Tang L, Wu S. Adjunctive treatment with high frequency repetitive transcranial magnetic stimulation for the behavioral and psychological symptoms of patients with Alzheimer's disease: a randomized, double blind, sham-controlled study. Shanghai Arch Psychiatry 2015; 27(5): 280-8.
39. Nitsche MA, Paulus W. Excitability changes induced in the human motor cortex by weak transcranial direct current stimulation. J Physiol 2000; 527 Pt 3():633-9.
40. Chang CH, Lane HY, Lin CH. Brain stimulation in Alzheimer's disease. Front Psychiatry 2018; 9: 201.
41. Ferrucci R, Mameli F, Guidi I, Mrakic-Sposta S, Vergari M, Marceglia S i sur. Transcranial direct current stimulation improves recognition memory in Alzheimer disease. Neurology 2008; 71(7): 493–8.
42. Boggio PS, Khoury LP, Martins DC, Martins OE, de Macedo EC, Fregni F. Temporal cortex direct current stimulation enhances performance on a visual recognition memory task in Alzheimer disease. J Neurol Neurosurg Psychiatry 2009;80(4): 444–7.
43. Boggio PS, Ferrucci R, Mameli F, Martins D, Martins O, Vergari M i sur. Prolonged visual memory enhancement after direct current stimulation in Alzheimer's disease. Brain Stimul 2012; 5(3): 223-30.
44. Khedr EM, Gamal NF, El-Fetoh NA, Khalifa H, Ahmed EM, Ali AM i sur. A double-blind randomized clinical trial on the efficacy of cortical direct current stimulation for the treatment of Alzheimer's disease. Front Aging Neurosci 2014; 6: 275.
45. Cotelli M, Manenti R, Brambilla M, Petesi M, Rosini S, Ferrari C i sur. Anodal tDCS during face-name associations memory training in Alzheimer's patients. Front Aging Neurosci 2014; 6: 38.
46. Bystad M, Gronli O, Rasmussen ID, Gundersen N, Nordvang L, Wang-Iversen H i sur. Transcranial direct current stimulation as a memory enhancer in patients with Alzheimer's disease: a randomized, placebo-controlled trial. Alzheimer's Res Ther 2016; 8: 13.
47. Kim K, Han JW, So Y, Seo J, Kim YJ, Park JH, Cognitive Stimulation as a Therapeutic Modality for Dementia: A Meta-Analysis. Psychiatry Invest 2017; 14(5): 626-39.
48. Woods B, Aguirre E, Spector AE, Orrell M. Cognitive stimulation to improve cognitive functioning in people with dementia. Cochrane Database Syst Rev 2012; (2): CD005562.

Antidepresivi u starijih osoba

/ Antidepressants in the Elderly Population

Marina Šagud, Bjanka Vuksan Ćusa, Alma Mihaljević-Peleš

Medicinski fakultet Sveučilišta u Zagrebu, Klinički bolnički centar Zagreb, Klinika za psihijatriju, Zagreb, Hrvatska
/ School of Medicine, University of Zagreb, University Hospital Centre Zagreb, Department of Psychiatry, Zagreb, Croatia

Depresija pripada u kronične poremećaje s najvećim stupnjem onesposobljenosti, a njezina učestalost raste s dobi. Nadalje, starije osobe oboljele od depresivnog poremećaja imaju brojna obilježja koja ih razlikuju od ostalih dobnih skupina, poput tjelesnih komorbiditeta zbog kojih uzimaju često brojne lijekove, ograničene pokretljivosti, dugotrajne boli, kognitivnog propadanja, socijalne izolacije, usamljenosti, a zbog starenja prisutne su i fiziološke promjene u gotovo svim organima. Antidepresivi su temeljna terapija depresivnog poremećaja u svakoj životnoj dobi. U mlađih odraslih osoba svi su antidepresivi podjednako učinkoviti. Međutim, učinak antidepresiva u starijih osoba je u osnovi slabiji, te se razlikuje između pojedinih antidepresiva. Starije su osobe iznimno osjetljive na nuspojave antidepresiva, kao i na farmakodinamske i farmakokinetske interakcije s drugim supstancijama. Stoga je za uspjeh liječenja ključan ciljan odabir antidepresiva, polagana titracija doze, te primjena najniže terapijske doze održavanja, uz pažljivo praćenje stanja bolesnika.

Liječenje depresije u starijoj dobi izazov je za kliničara. S obzirom na veliku heterogenost kliničke slike, te brojne tjelesne bolesti, potrebna su kvalitetna istraživanja pojedinih podskupina starijih osoba s depresijom. Individualni pristup iznimno je bitan u svakodnevnom liječenju ovih vrlo ranjivih bolesnika.

/ Depression is among the most disabling chronic disorders, and its prevalence appears to increase with age. Elderly depressed patients differ from younger adults with depression in many ways, such as the presence of multimorbidity, complex treatment regimens, reduced mobility, chronic pain, cognitive decline, social isolation and loneliness, and physiological changes in almost all organs. Antidepressants are the first-line treatment for depression in any age. While all antidepressants have similar efficacy in younger adults, elderly individuals might respond differently to particular ones. Elderly individuals are highly vulnerable to adverse events and to both pharmacodynamics and pharmacokinetic drug-drug interactions. Therefore, careful choice of antidepressant, slow dose-titration, and the lowest effective maintenance dose, with close monitoring for potential adversities, are essential.

Treatment of depression in older age is a major challenge. Given the substantial clinical heterogeneity of clinical presentations and comorbid conditions, more high-quality studies are needed in selected subpopulations, while an individualized approach remains a high priority.

ADRESA ZA DOPISIVANJE / *CORRESPONDENCE*:
Prof. dr. sc. Marina Šagud, dr. med.
Klinika za psihijatrijuMedicinskog fakulteta
Sveučilišta u Zagrebu,
KBC Zagreb
Kišpatićeva 12
10 000 Zagreb, Hrvatska
E-pošta: MarinaSagud@mail.com

KLJUČNE RIJEČI / *KEY WORDS*:
Antidepresivi / *Antidepressants*
Farmakoterapija / *Pharmacotherapy*
Liječenje / *Treatment*
Starije osobe / *Elderly people*

TO LINK TO THIS ARTICLE: https://doi.org/10.24869/spsih.2019.335

UVOD

Depresivni poremećaj može se pojaviti u svakoj životnoj dobi, počevši od djetinjstva. Cilj ovog kratkog preglednog rada jest prikaz terapije antidepresivima u starijih osoba s depresivnim poremećajem. Na početku valja napomenuti da se postojeća literatura jako razlikuje prema dobnoj granici, kada počinje starija dob. Prema nekim autorima je to iznad 65 (1-3), ili iznad 60 (4-6) a prema nekima već iznad 55 godina (7,8). Nadalje, depresija koja se pojavi tek u starijoj životnoj dobi još se naziva i depresija starije životne dobi, ili depresija s kasnim početkom, dok se ona koja počinje u ranijoj dobi naziva i depresija s ranim početkom. Simptomi depresije nikako nisu dio procesa starenja, iako pojavnost depresije raste s dobi. Depresivni poremećaj prisutan je u 7 % osoba starije životne dobi (5). Međutim, u osoba starijih od 100 godina izmjerena je učestalost depresivnih simptoma od čak 32,2 % (9).

Postoji složeni i još uvijek nedovoljno poznat odnos između depresije, posebice one s kasnim početkom, i demencije, a posebice Alzheimerove bolesti. Čini se da je njihov odnos dvosmjeran, budući da depresija s jedne strane prethodi demenciji, a s druge strane može biti i njezina posljedica (6). U nedavnom preglednom radu prikazani su neki potencijalno povoljni učinci selektivnih inhibitora ponovne pohrane serotonina (SIPSS) na biološke pokazatelje Alzheimerove bolesti (6).

Starije osobe s depresivnim poremećajem imaju drukčija obilježja od mlađih bolesnika. Na primjer, često su smanjene pokretljivosti, imaju kroničnu bol, vrlo su krhki, često u fazi žalovanja, slabijeg socioekonomskog statusa nakon umirovljenja, te također socijalno izolirani i usamljeni (5). Starenje organizma popraćeno je brojnim fiziološkim promjenama, poput gubitka neurona, smanjenja protoka u moždanim arterijama, redukcije količine P glikoproteina, kao i sklonosti nastanku hipotenzije (10).

Starije osobe s depresijom vrlo često imaju brojne tjelesne komorbiditete u sklopu kojih uzimaju razne lijekove. Stoga je polifarmacija česta, a s njom

INTRODUCTION

Depression might occur at any age, starting from childhood. The topic of this article is depression in the elderly, late-life depression or geriatric depression. However, the age of onset of "older age" in the population is not clearly defined. It refers to the presence of depressive disorder in individuals of over 65 (1-3), 60 (4-6), or even over 55 (7,8) years of age. If patients experienced their first depressive episode in this age, they are considered to have late-onset depression, and if they had depressive episodes previously, they had early-onset depression. While depression is not an essential part of ageing, the prevalence of depression appears to increase with age. Unipolar depression was found to affect 7% of the world's older population (5). However, the prevalence of depressive symptoms in individuals older than 100 years was 32.2% (9).

The relationship between depression, particularly the late-onset one, and dementia of Alzheimer type (DAT) is complex. There is evidence that depression in older age is both a risk factor and a consequence of dementia (6). The potential beneficial effects of SSRIs on pathophysiological biomarkers of DAT has been recently reviewed (6).

Older patients with depression differ substantially from younger age groups. They face additional issues such as reduced mobility, chronic pain, frailty, bereavement, drop in socioeconomic status with retirement, and isolation or loneliness (5). Ageing is also characterized by a number of physiological changes, including loss of neurons, decline in cerebral blood flow, reduction of P-glycoprotein levels, and higher tendency for orthostatic hypotension (10).

Depression in this age group is also characterized by the presence of medical comorbidities, requiring the use of different medications and frequently coexisting cognitive dysfunction.

i mogućnost interakcija lijekova. U starijoj dobi je, razumije se, česta i kognitivna disfunkcija.

PRIMJENA ANTIDEPRESIVA U STARIJOJ ŽIVOTNOJ DOBI

Antidepresivi su temelj liječenja depresije. U najvećoj mrežnoj meta-analizi do sada, u osoba starijih od 18 godina svi su antidepresivi bili učinkovitiji od placeba u liječenju akutne epizode, iako su među njima utvrđene razlike u učinkovitosti (11). Međutim, druga je meta-analiza, koja je obuhvatila samo istraživanja antidepresiva u starijoj dobi, pokazala da mnogi antidepresivi nisu imali veći učinak nego placebo, ali su kvetiapin i duloksetin, te također mirtazapin, escitalopram, imipramin, agomelatin i vortioksetin, bili učinkoviti u ovoj populaciji (12). Ovakvi rezultati pokazuju da je liječenje depresije u starijoj dobi poseban izazov. Na primjer, čak polovica starijih osoba s depresijom nije imala dobar odgovor na prvi primijenjeni lijek (3). Međutim, i ove činjenice treba uzeti s oprezom. Spomenuta meta-analiza je analizirala deset puta manji broj istraživanja (12) nego meta-analiza koja je obuhvatila dvostruko slijepa istraživanja u odrasloj dobi (11). Naime, starija životna dob je isključni kriterij u većini istraživanja antidepresiva. Ipak, najzanimljivije jest da je kvetiapin, koji uopće nije odobren kao monoterapija depresije, bio najučinkovitiji lijek, kako u odgovoru na antidepresive, tako i u postizanju remisije kod starijih osoba s depresijom (12). No ne znamo je li kvetiapin u monoterapiji ovako učinkovit i u mlađih osoba s depresijom, jer nije bio uključen u ranije spomenutu meta-analizu (11). Valja pritom napomenuti da su meta-analize uključile samo dvostruko slijepa istraživanja (11,12), te je pitanje mogu li se njihovi rezultati primijeniti i na čitavu populaciju starijih osoba s depresijom. Naime, uključni kriteriji za ovakva istraživanja su vrlo strogi, te pacijenti sa somatskim multimorbiditetima, posebice s nereguliranim tjelesnim simptomima, ne mogu biti uključe-

Therefore, polypharmacy is common, as are drug-drug interactions, while the sensitivity to adverse reactions is increased.

TREATMENT OF DEPRESSION IN THE ELDERLY

Antidepressants are the cornerstone for the treatment of depression. In the most comprehensive network meta-analysis to date in individuals older than 18 years, all antidepressants had higher acute response rates compared to placebo, although some differences were demonstrated across different agents (11). However, the other meta-analysis, conducted specifically on elderly patients, demonstrated that many antidepressants did not outperform placebo, whereas quetiapine and duloxetine, followed by mirtazapine, escitalopram, imipramine, agomelatine, and vortioxetine, were the most efficacious (12). Those findings suggest that the treatment of depression in elderly individuals is a particular challenge. For example, half of the elderly individuals had no response to the first-line agent (3). However, those conclusions should be drawn with caution, given that the former study analysed almost 10 times more trials (11) than the latter (12). This is because elderly patients were excluded from many trials. The most striking finding is that quetiapine, which has no improved indication as monotherapy in major depression, was the most effective drug in terms of achieving both response and remission during acute treatment of depression in elderly patients (12). While both aforementioned large meta-analyses focused on randomized-controlled trials (11, 12), those data, particularly regarding older patients, might not be applicable to all patients. Participants with multiple comorbidities, especially unstable medical conditions requiring complex drug regimens, are usually excluded from such

ni. A upravo je takvih bolesnika s depresijom mnogo u svakodnevnoj praksi. Zato u literaturi nema mnogo dokaza o učinku antidepresiva u depresivnih bolesnika starije životne dobi, koji se također liječe i zbog brojnih tjelesnih bolesti (7), te dobivaju višestruke kombinacije lijekova.

U svakom slučaju, terapiju antidepresivom u osoba starije životne dobi treba započeti s polovicom doze antidepresiva kojom započinje liječenje u odrasloj dobi (1), s pažljivom titracijom do minimalne učinkovite doze. Na primjer, nedavna meta-analiza dvostruko slijepih studija primjene SIPPSa u osoba starijih od 18 godina pokazala je da porast okupiranosti serotoninskog transportera ovim lijekovima za više od 80 % ne dovodi do daljnjeg povećanja učinka (13). Iako rezultati u osoba starije dobi nisu posebno analizirani, zapažen je nagli porast odustajanja od terapije zbog nuspojava, kako se doza SIPPSa povećavala (13).

Bez obzira na potencijalnu lošiju učinkovitost, te ostala navedena ograničenja, antidepresivi su prva linija liječenja u starijih osoba s depresijom (14), baš kao i u mlađih osoba, iako je u starijih osoba potreban dodatan oprez. Prema uputama o lijeku neki se antidepresivi u starijih osoba preporučuju primjenjivati u nižim dozama. Upute o titraciji, dozama održavanja te maksimalnim dopuštenim dozama antidepresiva u starijih osoba prikazuje tablica 1.

Međutim, u vrlo starih osoba, ili onih s brojnim tjelesnim bolestima, preporučuju se još niže početne doze, doze održavanja, te maksimalne doze (7). Duloksetin i venlafaksin smatraju se relativno sigurnim lijekovima što se tiče produženja QTc intervala i nastanka aritmija (17).

Starije su osobe posebice osjetljive na razvoj nuspojava, kako antidepresiva, tako i drugih lijekova. Stoga se mogu očekivati i farmakodinamske interakcije među različitim supstancijama. Neke od farmakodinamskih interakcija prikazuje tablica 2.

Napominjemo da tablica 2 ne prikazuje sve farmakodinamske interakcije, nego samo one koje

trials. Therefore, treatment of depression in individuals with unstable or severe medical comorbidities is not supported by evidence because such patients are often excluded from clinical trials (7).

The starting dose should be half of the initial adult dose (1) and be titrated until the patient responds. A recent meta-analysis of double-blind trials for individuals with MDD aged 18 years or older reported that increases in transporter occupancy above 80% by SIPSS did not improve treatment efficacy (13). While the latter study did not separately address older individuals, dropouts due to adverse effects increased steeply throughout the dosing range (13).

Regardless of those limitations, antidepressants are the first-line treatment in elderly patients with depression (14), which is similar to depression in younger individuals. However, in the age group of the elderly, particular vigilance is needed. According to the prescribing information, some antidepressants require dosing restrictions, careful initial dose titration, and monitoring, as shown in Table 1.

However, very old patients or those with medical comorbidities need even lower initial, maintenance, and maximum dosages of antidepressants (7).

Duloxetine and venlafaxine are considered relatively safe in respect to QTc prolongation and arrhythmias (17)

Elderly patients might be particularly sensitive to adverse effects of antidepressants, as well as those of other drugs. Some pharmacodynamic interactions which might occur between antidepressants and other drugs are shown in Table 2.

Elderly individuals are more vulnerable to side effects, which might occur in lower doses. For example, it was reported that about 8% of elderly individuals on SSRIs or venlafaxine

TABLICA 1. Preporuke o doziranju antidepresiva u starijih osoba
TABLE 1. Dosing recommendations for antidepressants in elderly patients

Antidepresivi / Antidepressants	Maksimalna dnevna doza u odraslih osoba (mg) / Maximum daily dose in adults (mg)	Maksimalna dnevna doza u starijih osoba (mg) / Maximum daily dose in the elderly (mg)	Sigurnost primjene / Safety considerations
SIPPS / SSRI			Povećan rizik hiponatremije i padova / Potential hyponatremia and increased risk of falls
Citalopram / Citalopram	40	20	Produženje QTc intervala ovisno o dozi / Dose-dependent QTc prolongation
Escitalopram / Escitalopram	20	10	Produženje QTc intervala ovisno o dozi / Dose-dependent QTc prolongation
Fluoksetin / Fluoxetine	60	40	
Fluvoksamin / Fluvoxamine	300	Nema ograničenja / No restrictions	Polaganija titracija doze i pažljiva opservacija / Slower dose titration and caution
Paroksetin / Paroxetine	50-60	40	Mogućnost antikolinergičkih nuspojava / Potential anticholinergic side effects
Sertralin / Sertraline	200	Nema ograničenja, no preporučuje se oprez / No restrictions, but caution is advised	
SNRI / SNRI			
Duloksetin / Duloxetine	120	Nema ograničenja, no preporučuje se oprez / No restrictions, but caution is advised	
Venlafaksin / Venlafaxine	375	Nema ograničenja, no preporučuje se oprez / No restrictions, but caution is advised	Preporučuje se najniža učinkovita doza / Lowest effective dose is recommended
Ostali antidepresivi / Other antidepressants			
Agomelatin / Agomelatine	50	Nema ograničenja doze do dobi od 75 godina / No dosing restrictions up to the age of 75 years	Ne preporučuje se starijima od 75 godina, jer nema dovoljno podataka / Not recommended in patients older than 75 years due to the lack of data
Amitriptilin / Amitriptyline	150-200 300 mg u hospitaliziranih bolesnika / 300 for inpatients	Polagana titracija, polovicom uobičajene doze / Slow dose titration; half of the usual dose is recommended	Mogućnost antikolinergičkih nuspojava i hipotenzije / Potential anticholinergic side effects and hypotension
Bupropion / Bupropion	300	Nema ograničenja / No restrictions	
Maprotilin / Maprotiline	150	75	Mogućnost antikolinergičkih nuspojava / Potential anticholinergic side effects
Mirtazapin / Mirtazapine	45	Nema ograničenja / No restrictions	
Moklobemid / Moclobemide	600	Nema ograničenja / No restrictions	
Reboksetin / Reboxetine	12	Najviša doza u kliničkim istraživanjima: 4 mg / Maximum dose in clinical trials: 4 mg	Ne preporučuje se u starijih osoba zbog nedovoljno podataka / Not recommended in elderly patients due to the lack of data
Sulpirid / Sulpiride	400	Nema ograničenja / No restrictions	Starije su osobe ↑ osjetljive na ekstrapiramidne nuspojave, sedaciju i hipotenziju / Elderly people are more sensitive to extrapyramidal side effects, sedation, and hypotension
Tianeptin / Tianeptine	37,5	Osobe s tjelesnom težinom<55 kg smiju primati najviše 12,5 mg2 x/dan / Patients with body weight <55 kg should receive maximum 12.5 mg b.i.d.	
Trazodon / Trazodone	300 600 mg u hospitaliziranih osoba / 600 for inpatients	Početna dnevna doza ne smije biti>100 mg, dok pojedine doze održavanja ne smiju biti više od 100 mg / Initial daily dose should not be >100 mg, while separate doses should not exceed 100 mg	Moguća sedacija i hipotenzija / Potential sedation and hypotension
Vortioksetin / Vortioxetine	20	Početna dnevna doza je 5 mg; oprez s dnevnim dozama iznad 10 mg / Starting dose should be 5 mg daily; caution with doses >10 mg daily	

SIPPS = Selektivni inhibitor ponovne pohrane serotonina / SSRI = Selective serotonin reuptake inhibitor
SNRI = Selektivni inhibitor ponovne pohrane noradrenalina / SNRI = Selective noradrenaline reuptake inhibitor
(Prema Kok i Reynolds, 2017;Beyeri Johnson, 2018;www.halmed.hr, 2019;Nevels i sur., 2016) / (According to Kok and Reynolds, 2017; Beyer and Johnson, 2018; www.halmed.hr, 2019; Nevelset et al., 2016)

TABLICA 2. Farmakodinamske interakcije antidepresiva i ostalih lijekova
TABLE 2. Pharmacodynamic interactions between antidepressants and other drugs

Antidepresivi / Antidepressants	Interakcije s: / Interaction with	Vrsta farmakodinamske interakcije / Pharmacodynamic interaction
SIPPS / SSRI	Antikoagulansima / Anticoagulants Antitrombocitnim lijekovima / Anti-platelet drugs Nesteroidnim antireumaticima / Non-steroid anti-inflammatory drugs	↑ Rizik krvarenja / ↑ Risk of bleeding
SIPPS / SSRIs SNRI / SNRIs TCA / TCAs	Diuretici / Diuretics ??? / Kidney disease	Hiponatremija / Hyponatremia
TCA / TCAs Paroksetin / Paroxetine	Klozapin / Clozapine Olanzapin / Olanzapine Kvetiapin / Quetiapine Biperiden / Biperiden	Antikolinergičke nuspojave / Anticholinergic effects

SIPPS = Selektivni inhibitori ponovne pohrane serotonina / SSRI = Selective serotonin reuptake inhibitor
??? / SSRIs = Selective serotonin reuptake inhibitors
SNRI = Selektivni inhibitori ponovne pohrane noradrenalina / SNRIs = Selective noradrenaline reuptake inhibitors
TCA = Triciklički antidepresivi / TCAs = Tricyclic antidepressants
(Prema Trifirò i Spina, 2011; Nevelsi sur., 2016;Sultana i sur., 2015) / (According to Trifirò and Spina, 2011; Nevelset et al., 2016; Sultana et al., 2015)

su najbolje utvrđene. U starijih osoba nuspojave lijekova se javljaju već kod nižih doza nego u mlađih osoba. Na primjer, u oko 8 % starijih osoba koje dobivaju SIPPS ili venlafaksin, zapažena je hiponatremija, kao posljedica sindroma neadekvatne sekrecije antidiuretskog hormona (1). Međutim, brojne se nuspojave mogu spriječiti propisivanjem najnižih učinkovitih doza, te pažljivim izbjegavanjem farmakodinamskih i farmakokinetskih nuspojava (17). Općenito, SIPPS i SNRI se smatraju terapijom prvog izbora u starijih osoba s depresijom (14). Također se individualna terapija smatra modernim standardom liječenja, što posebice dolazi do izražaja u starijoj životnoj dobi. Tako izbor antidepresiva može ovisiti i o nuspojavi koju želimo izbjeći. Prema meta-analizi, mirtazapin i amitriptilin bili su povezani s manje mučnine, maprotilin i mianserin s rjeđom nesanicom, a tianeptin s manje vrtoglavice, u usporedbi s ostalim antidepresivima (12). Trazodon može poboljšati kvalitetu spavanja. Antidepresivi koji jako povećavaju serotonergičku aktivnost mogu povećati vjerojatnost fraktura u starijih osoba (17). Osim navedenih nuspojava preporuka je da, ako ne dođe do početnog terapijskog odgovora na kraju drugog tjedna terapije, treba ili promijeniti antidepresiv, ili dodati drugi lijek, posebice u osoba koje imaju i druge potencijalne pokazatelje lošeg odgovora na terapiju (14).

would develop hyponatremia related to the syndrome of inappropriate secretion of the antidiuretic hormone (SIADS) (1). Many potential adverse events might be prevented by both prescribing the lowest effective antidepressant dose and avoiding potential PD and PK interactions (17).

In general, SSRI/SNRIs are considered the first-line treatment for the depression in the elderly (14). However, individual treatment is crucial, especially in the elderly population. The choice on antidepressants might also depend on the avoidance of potential adverse events. According to a recent network meta-analysis of side effects, mirtazapine and amitriptyline were associated with less nausea, maprotiline and mianserine with less insomnia, and tianeptine with less dizziness, compared to some other antidepressants (12). Trazodone might improve sleep quality. Antidepressants with high serotonin activity are associated with the risk of fractures in elderly (17). In patients with poor response to a chosen antidepressant at week 2, a switch to another drug or the augmentation of the current regimen is recommended, particularly in those with predictors of treatment resistance (14).

Given that elderly patients with depression frequently receive polypharmacy, drug-drug

S obzirom na čestu polifarmaciju u starijih osoba kod uvođenja antidepresiva bitno je uvijek razmotriti moguće interakcije s ostalim lijekovima. Većina ovih interakcija se odvija putem enzima citokroma P 450 (CYP 450). Antidepresivi mogu biti supstrati i/ili inhibitori nekoliko skupina ovih enzima, kao što je prikazano u tablici 3.

interactions also need to be considered when choosing antidepressants. The majority of those interactions occur via cytochrome P 450 (CYP 450) enzymes. Antidepressants are substrates for those enzymes, and some of them are also inhibitors of several CYP450 isoenzymes, which is shown in Table 3.

TABLICA 3. Antidepresivi kao supstrati i/ili inhibitori CYP 450 enzima
TABLE 3. Antidepressants as substrates and inhibitors for enzymes CYP 450

Skupina CYP450 / CYP450	Supstrati / Substrates	Inhibitori / Inhibitors	Induktori / Inducers
1A2	**Agomelatin / Agomelatine** **Duloksetin / Duloxetine** **Mirtazapin / Mirtazapine** Klozapin / Clozapine Olanzapin / Olanzapine Teofilin / Theophylline	**Fluvoksamin / Fluvoxamine** Ciprofloksacin / Ciprofloxacin Norfloksacin / Norfloxacin	Omeprazol / Omeprazole Rifampicin / Rifampicin Gospina trava / St. John's wort Karbamazepin / Carbamazepine Ritonavir / Ritonavir
CYP2C9	Varfarin / Warfarin Losartan / Losartan **Fluoksetin (↓) / Fluoxetine (↓)** **Sertralin (↓) / Sertraline (↓)**	Amjodaron / Amiodarone Fluvastatin / Fluvastatin Lovastatin / Lovastatin Tiklopidin / Ticlopidine **Fluoksetin (↓) / Fluoxetine (↓)** **Fluvoksamin (↓) / Fluvoxamine (↓)** **Paroksetin (↓) / Paroxetine (↓)** **Sertralin (↓) / Sertraline (↓)**	Gospina trava / St. John's wort
CYP2C19	**Amitriptilin / Amitriptyline** **Citalopram / Citalopram** **Escitalopram / Escitalopram** **Moklobemid / Moclobemide** Klopidrogel / Clopidogrel Omeprazol / Omeprazole	**Fluoksetin / Fluoxetine** **Fluvoksamin / Fluvoxamine** **Moklobemid / Moclobemide** Tiklopidin / Ticlopidine	Karbamazepin / Carbamazepine Fenitoin / Phenytoin Fenobarbiton / Phenobarbitone Gospina trava / St. John's wort
CYP2D6	**Duloksetin / Duloxetine** **Venlafaksin / Venlafaxine** **Vortioksetin / Vortioxetine** **Maprotilin / Maprotiline** **Mirtazapin / Mirtazapine** **Sertralin / Sertraline** Antipsihotici (flufenazin, haloperidol, risperidon) / Antipsychotics (fluphenazine, haloperidol, risperidone) Metadon / Methadone Antiaritmici (flekainid) / Antiarrhythmics (flecainide) Tramadol / Tramadol Beta-blokatori (nebivolol, metoprolol, propranolol) / Beta-blockers (nebivolol, metoprolol, propranolol)	**Fluoksetin / Fluoxetine** **Paroksetin / Paroxetine** Amjodaron / Amiodarone Kinidin / Quinidine Ritonavir / Ritonavir Tiklopidin / Ticlopidine	
CYP3A4	**Kvetiapin / Quetiapine** **Mirtazapin / Mirtazapine** **Trazodon / Trazodone** Antipsihotici (aripiprazol, brekspiprazol, kariprazin) / Antipsychotics (aripiprazole, brexpiprazole, cariprazine) Statini / Statins Makrolidi... / Macrolides...	Diltiazem / Diltiazem Eritromicin / Erythromycin Inhibitori protein kinaze / Protein kinase inhibitors Indinavir / Indinavir Itrakonazol / Itraconazole Ketokonazol / Ketoconazole Verapamil / Verapamil **Fluoksetin / Fluoxetine** **Fluvoksamin / Fluvoxamine** **Sertralin (↑ doze) / Sertraline (↑ doses)**	Karbamazepin / Carbamazepine Fenitoin / Phenytoin Fenobarbiton / Phenobarbitone Gospina trava / St. John's Worth Rifampicin / Rifampicin Glukokortikoidi / Glucocorticoids

(Prema Mannheimer i sur., 2008; Spina i de Leon, 2014; Spina i sur., 2016; Šagud i sur.,2017; Piña i sur., 2018; Goodlet i sur., 2019) / (According to Mannheimer *et al.*, 2008; Spina and de Leon, 2014; Spina *et al.*, 2016; Šagud *et al.*, 2017; Piña et al., 2018; Goodlet *et al.*, 2019)

ZAKLJUČAK

Depresivni poremećaj u starijoj dobi je često težak i onesposobljavajući, te se svakako treba liječiti. S obzirom na vrlo velik raspon dobi ove populacije, koji obuhvaća više od 40 godina, depresivni poremećaj uključuje osobe u različitim životnim razdobljima. Stoga osobe na donjoj granici ovog raspona mogu još uvijek biti radno aktivne, dok ostale mogu biti desetljećima umirovljene. Stoga mogu postojati i značajne razlike u životnim navikama, komorbiditetu i kognitivnim sposobnostima. Naziv „starije osobe" obuhvaća vrlo raznoliku populaciju, te sadrži vjerojatno nekoliko vrlo različitih kategorija. Još uvijek nemamo dovoljno podataka o učinkovitosti i podnošljivosti antidepresiva u starijoj populaciji. Za sada, dok još nemamo pouzdanih bioloških pokazatelja, izbor antidepresiva se temelji na vodećim simptomima kod pojedine osobe, prisutnosti tjelesnih bolesti, nuspojavama koje želimo izbjeći, te ostaloj terapiji koju bolesnik dobiva. Individualni pristup, uz uporabu najniže učinkovite doze, principi su moderne psihofarmakologije, a od ključne su važnosti u osobito ranjivoj populaciji starijih bolesnika s depresivnim poremećajem.

CONCLUSION

Major depression in the old age is potentially dangerous and disabling, and should be treated. Given the wide range of the term "elderly people", which encompasses more than 40 years, it includes individuals in different life phases. For example, some of them might still be employed at the lower age-limits, while others might be retired for decades. They might differ significantly in terms of life habits, comorbidity, and cognition. Therefore, the term "elderly" is not a uniform construct, and needs to be re-defined and probably divided into several categories. More data is needed regarding the efficacy and safety of antidepressants in the elderly population. So far, and in the absence of reliable biomarkers, the choice of antidepressants is based on the leading symptoms of depression, the presence of somatic comorbidities, and concomitant treatment. An individualized treatment approach and the use of the lowest effective dose is a rule in modern psychopharmacology, but appears to be essential in the extremely vulnerable population of elderly patients with depression.

LITERATURA/*REFERENCES*

1. Frank C. Pharmacologic treatment of depression in the elderly. Can Fam Physician 2014; 60(2): 121-6.
2. Krause M, Gutsmiedl K, Bighelli I, Schneider-Thoma J, Chaimani A, Leucht S. Efficacy and tolerability of pharmacological and non-pharmacological interventions in older patients with major depressive disorder: A systematic review, pairwise and network meta-analysis. Eur Neuropsychopharmacol 2019; 29(9): 1003-22.
3. Smagula SF, Butters MA, Anderson SJ, Lenze EJ, Dew MA, Mulsant BH *et al*. Antidepressant response trajectories and associated clinical prognostic factors among older Adults. JAMA Psychiatry 2015; 72(10): 1021-8.
4. Taylor WD. Clinical practice. Depression in the elderly. N Engl J Med 2014; 371(13): 1228-36.
5. https://www.who.int/news-room/fact-sheets/detail/mental-health-of-older-adults
6. Mdawar B, Ghossoub E, Khoury R. Selective serotonin reuptake inhibitors and Alzheimer's disease. Neural Regen Res 2020; 15(1): 41-6.
7. Kok RM, Reynolds CF 3rd. Management of Depression in Older Adults: A Review. JAMA 2017; 317(20): 2114-22.
8. Biella MM, Borges MK, Strauss J, Mauer S, Martinelli JE, Aprahamian I. Subthreshold depression needs a prime time in old age psychiatry? A narrative review of current evidence. Neuropsychiatr Dis Treat 2019; 15: 2763-72.
9. Yao Y, Fu S, Zhang H, Li N, Zhu Q, Zhang F *et al*. The prevalence of depressive symptoms in Chinese longevous persons and its correlation with vitamin D status. BMC Geriatr 2018; 18(1): 198.
10. Trifirò G, Spina E. Age-related changes in pharmacodynamics: focus on drugs acting on central nervous and cardiovascular systems. Curr Drug Metab 2011; 12(7): 611-2.
11. Cipriani A, Furukawa TA, Salanti G, Chaimani A, Atkinson LZ, Ogawa Y *et al*. Comparative efficacy and acceptability of 21 antidepressant drugs for the acute treatment of adults with major depressive disorder: a systematic review and network meta-analysis. Lancet 2018; 391(10128): P1357-1366.

12. Krause M, Gutsmiedl K, Bighelli I, Schneider-Thoma J, Chaimani A *et al.* Efficacy and tolerability of pharmacological and non-pharmacological interventions in older patients with major depressive disorder: A systematic review, pairwise and network meta-analysis. Eur Neuropsychopharmacol 2019; 29(9): 1003-22.
13. Furukawa TA, Cipriani A, Cowen PJ, Leucht S, Egger M, Salanti G. Optimal dose of selective serotonin reuptake inhibitors, venlafaxine, and mirtazapine in major depression: a systematic review and dose-response meta-analysis. Lancet Psychiatry 2019; 6(7): 601-9.
14. Beyer JL, Johnson KG. Advances in pharmacotherapy of late-life depression. Curr Psychiatry Rep 2018; 20(5): 34.
15. www.halmed.hr
16. Nevels RM, Gontkovsky ST, Williams BE. Paroxetine-The antidepressant from hell? Probably not, but caution required. Psychopharmacol Bull 2016; 46(1): 77-104.
17. Sultana J, Spina E, Trifirò G. Antidepressant use in the elderly: the role of pharmacodynamics and pharmacokinetics in drug safety. Expert Opin Drug Metab Toxicol 2015; 11(6): 883-92.
18. Mannheimer B, von Bahr C, Pettersson H, Eliasson E. Impact of multiple inhibitors or substrates of cytochrome P450 2D6 on plasma risperidone levels in patients on polypharmacy.Ther Drug Monit 2008; 30(5): 565-9.
19. Spina E, de Leon J. Clinically relevant interactions between newer antidepressants and second-generation antipsychotics. Expert Opin Drug Metab Toxicol 2014; 10(5): 721-46.
20. Spina E, Pisani F, de Leon J. Clinically significant pharmacokinetic drug interactions of antiepileptic drugs with new antidepressants and new antipsychotics. Pharmacol Res 2016; 106: 72-86.
21. Šagud M, MihaljevićPeleš A, Vuksan Ćusa B, Klinar I. Antipsychotic interactions - Why do they matter? Medicus 2017; 26(2): 141-50.
22. Piña IL, Di Palo KE, Ventura HO. Psychopharmacology and Cardiovascular Disease. J Am Coll Cardiol 2018; 71(20): 2346-59.
23. Goodlet KJ, Zmarlicka MT, Peckham AM. Drug-drug interactions and clinical considerations with co-administration of antiretrovirals and psychotropic drugs. CNS Spectr 2019; 24(3): 287-312.

Logoterapija kao psihoterapijska tehnika na psihogerijatrijskom palijativnom odjelu

/ Logotherapy as a Psychotherapeutic Technique in Psychogeriatric Palliative Care Wards

Mirna Sisek-Šprem[1,2], Cvijeta Pahljina[3], Miroslav Herceg[1,4], Ninoslav Mimica[1,2,4], Lucija Petrović[5], Biserka Radovanić[1,2]

[1]Klinika za psihijatriju Vrapče, Zagreb, [2]Referentni centar Ministarstva zdravstva Republike Hrvatske za Alzheimerovu bolest i psihijatriju starije životne dobi, Zagreb, [3]Hrvatska udruga za logoterapiju LOGOS, Zagreb, [4]Sveučilište u Zagrebu, Medicinski fakultet, Zagreb,[5]Filozofski fakultet, Zagreb, Hrvatska

/ [1]University Psychiatric Hospital Vrapče, Zagrebh, [2]Referal Centre of the Ministry of Health of the Republic of Croatia for Alzheimer's Disease and Old Age Psychiatry, Zagreb, [3]Croatian Society for Logotherapy LOGOS, Zagreb, [4]University of Zagreb, Medical Faculty, Zagreb, [5]University of Zagreb, Faculty of Letters, Zagreb, Croatia

Kod svakog bolesnika, a osobito onog s neizlječivom bolesti kao što je demencija, neophodan je holistički pristup. Posljednjih godina se razvojem palijativne medicine nastoji ublažiti tjelesna bol i psihološka patnja, kako bi se bolesniku poboljšala preostala kvaliteta života i omogućilo dostojanstveno umiranje. Patnja kroz koju prolazi bolesnik utječe na članove njegove obitelji, ali i na medicinsko osoblje - članove palijativnog tima. Postavlja se pitanje kako pomoći kada je kurativna medicina svojim dijagnostičkim i terapijskim pristupom iscrpila svoje mogućnosti. Budući da je jedan od principa djelovanja u palijativnoj medicini integralna medicinska skrb na fizičkoj, psihičkoj i duhovnoj razini, najprihvatljivija psihoterapijska metoda kod ovih bolesnika je logoterapija, koja osobu doživljava kroz sve ove dimenzije, a posebno naglašava važnost duhovne. Logoterapija se uspješno koristi i kod članova obitelji bolesnika, a njeni principi pomažu i članovima palijativnog tima da se nose s različitim izazovima svakodnevnog posla. U središtu logoterapije je spoznaja da je čovjek, prema svojoj prirodi, usmjeren prema traženju smisla, u čemu treba osluškivati svoju savjest. Logoterapija ukazuje na prepoznavanje sudbinskog i slobodnog prostora i potiče na aktivno djelovanje u slobodnom prostoru. Čak i kada se sudbina ne može promijeniti (bolest, smrt), čovjek je slobodan prema njoj zauzeti stav. Naša najjača motivacija je tražiti smisao izvan sebe, u nekome ili nečemu, na način da nadiđemo svoje „ja". Imati smislenu životnu zadaću, znači imati zdravi život.

/ With each patient, especially those with an incurable disease such as dementia, a holistic approach is essential. In recent years, through the development of palliative medicine, medical professionals have been trying to reduce physical pain and psychological suffering in order to improve the patient's quality of life and to enable a dignified death. The patient's suffering affects their family members, as well as medical staff - the palliative care professionals. The question is how to help when curative medicine has exhausted all its options with its diagnostic and therapy treatments. Since integral medical care on a physical, psychological, and spiritual level is one of the principles of action in palliative medicine, the best psychotherapeutic method for treating such patients is logotherapy, which considers a person through all these dimensions, with special focus on the spiritual. Logotherapy is successfully used with the patient's family members, and its principles help palliative care professionals deal with the different challenges of their daily work.

Logotherapy is based on the understanding that it is in the human nature to search for meaning while guided by conscience. Logotherapy points at recognizing human fate and freedom and encourages actively exercising that freedom. Even when fate cannot be changed (death, illness), a person is free to choose the attitude they have toward it. Our strongest motivation is to search for meaning outside ourselves, in someone or something, by transcending our "self". To have a meaningful purpose in life is to have a healthy life.

ADRESA ZA DOPISIVANJE / *CORRESPONDENCE*:
Dr. sc. Mirna Sisek-Šprem, dr. med.
Klinika za psihijatriju Vrapče
Bolnička cesta 32
10090 Zagreb, Hrvatska
E-pošta: mirna.sisek-sprem@bolnica-vrapce.hr

KLJUČNE RIJEČI / KEY WORDS:
Članovi obitelji / *Family Members*
Demencija / *Dementia*
Logoterapija / *Logotherapy*
Palijativni tim / *Palliative Team*

TO LINK TO THIS ARTICLE: https://doi.org/10.24869/spsih.2019.344

UVOD

Od psihoterapijskih metoda prikladnih za osobe kojima je dijagnosticirana teška, neizlječiva bolest navode se egzistencijska psihoterapija, neki elementi kognitivno-bihevioralne, psihodinamske i interpersonalne psihoterapije te grupne intervencije (grupe bolesnika i grupe obitelji) (1,2). S obzirom na specifičnost problematike (suočavanje sa smrću i smislom života) te nužnost holističkog pristupa, korisna je i logoterapija. Ovu vrstu psihoterapije utemeljio je Viktor E. Frankl (1905.-1997.), poznati bečki neurolog i psihijatar. Logoterapija (*logos*, gr.- smisao, um, govor, zakon) je psihoterapijski pravac izrastao iz egzistencijske analize, koja počiva na filozofskom pravcu, egzistencijalizmu (3).

TEMELJI LOGOTERAPIJE

Franklova antropologija prikazuje čovjeka kao tjelesno, psihičko i duhovno biće, koje je jedinstveno i neponovljivo, koje je upućeno na druge i ima potrebu za traženjem smisla. Možemo otkrivati smisao u životu na tri načina: 1. djelovanjem (hobi, posao, sport); 2. doživljajima (umjetnost, boravak u prirodi, ljubav); 3. patnjom (4). Upravo zbog svoje duhovne dimenzije čovjek ima sposobnost odmaknuti se od sebe, tj. odreći se nečega i podnijeti neugodne osjećaje samo ako za to ima smisleni razlog (5). Iako nas određuje biološka, psihološka i sociološka komponenta, ništa nas od toga ne treba odrediti jer sve ovisi o našem stavu, o našem duhovnom. Ovo najviše do-

INTRODUCTION

Psychotherapeutic methods considered appropriate for patients diagnosed with a serious, incurable disease are existential psychotherapy, some elements of cognitive behavioural therapy, psychodynamic and interpersonal psychotherapy, as well as group interventions (patient groups and family groups) (1,2). Considering the specificity of the issue (confronting death and the meaning of life) and the necessity of a holistic approach, logotherapy is beneficial as well. This type of psychotherapy was established by Viktor E. Frankl (1905-1997), a well-known Viennese neurologist and psychiatrist. Logotherapy (*logos*, gr. - meaning, mind, speech, law) is a form of psychotherapy based on existential analysis, which rests on the philosophy of existentialism (3).

BASIC PRINCIPLES OF LOGOTHERAPY

Frankl's anthropology considers a person a physiological, psychological, and spiritual being which is unique and unrepeatable, directed towards others, and which has a need to search for meaning ("will-to-meaning"). Meaning in life can be discovered in three ways: 1. through action (hobby, work, sport); 2. through experience (art, staying in nature, love); 3. through suffering (4). It is precisely the spiritual dimension which allows self-transcendence, which means giving up something and bearing unpleasant feelings, but only if there is a meaningful reason for it (5). Even though we are determined

lazi do izražaja u suočavanju s neizbježnom patnjom (bolest, smrt). Logoterapija pomaže osobi da uvidi – iako su činjenice o njegovoj nesreći točne i nepromjenjive – da joj ipak preostaje izbor stava prema njima. Logoterapija poziva osobu da svoje trpljenje ugradi u neku smislenu vezu koju može shvatiti i prihvatiti (6). U pristupu čovjeku oslanja se na njegove „ jake strane“ tražeći ono što je pozitivno, njegove dobre osobine i talente. Dakle, imamo slobodu, ali i odgovornost za odluku i smisleno djelovanje u svakom danu jer je život potrebno shvaćati kao zadaću. Ne postoji jedinstveni recept za nalaženje smisla, jer zadaće se mijenjaju ne samo od čovjeka do čovjeka - u skladu s jedinstvenošću svake osobe - već i iz sata u sat, prema neponovljivosti svake situacije (5). Što je smisao opsežniji, to je manje shvatljiv. Čovjek ima svijest o svojoj zemaljskoj prolaznosti i živi idući čitavo vrijeme prema smrti. Prema Franklu, upravo nam ta ograničenost omogućava da shvatimo dragocjenost svakog životnog trenutka, te upozorava: „Sve što je u vječnosti zapisano ne može se izgubiti – to nam je utjeha i nada. No, isto tako vrijedi da se u njoj više ništa ne da ispraviti – to nam je opomena i podsjetnik“ (3).

Logoterapijske metode zasnivaju se na prepoznavanju odrednica sudbine i slobodnog prostora. Budući da logoterapeut načelno djeluje na području slobodnog duhovnog stava pacijenta, upućuje ga na aktivan stav prema životu (problemu), tj. da život može ili pozitivno preoblikovati ili ignorirati ili ironizirati. U tome se očituju tri glavne logoterapijske tehnike: modulacija stava (pomicanje težišta s negativnog na pozitivno), paradoksna intencija (ironiziranje, ismijavanje vlastitog straha, priželjkuje ono čega se boji) i Sokratovski dijalog (pažljivo slušanje bolesnikovih odgovora, kako bi mu se pomoglo da osvijesti svoja znanja i iskustva). Ostale logoterapijske tehnike su derefleksija (nadilaženje sebe i usmjeravanje nekom smislenom cilju), prkosna moć

by our biological, psychological, and sociological components, none of these need to define us because everything depends on our attitude, our spiritual component. This becomes evident in dealing with unavoidable suffering (illness, death). Logotherapy helps a person see that they still have the freedom to choose their attitude even though their misery is real and immutable. Logotherapy invites a person to create something they can understand and accept out of their suffering (6). In its approach to people, it relies on their “strengths”, searching for their positive aspects, their virtues and talents. Therefore, we have freedom, as well as a responsibility to choose and act meaningfully each day because life has to be seen as a task. There is no one recipe for finding meaning because tasks vary not only from person to person (in accordance with the uniqueness of each individual) but also from hour to hour in accordance with the uniqueness of each situation (5). The more comprehensive the meaning, the less understandable it is. A person is aware of their limited time on Earth and they live their life by moving towards death. According to Frankl, this limited time allows us to understand that each moment is precious and warns: “All that is set in eternity cannot be lost - this is our solace and hope. Yet, it is likewise true that in eternity nothing can be changed - this is our warning and reminder” (3).

The methods of logotherapy are based on recognizing the determinants of destiny and freedom. Since a logotherapist primarily acts in the area of free spiritual attitude of the patient, they direct the patient to an active attitude towards life (the problem), i.e. that they can either positively reshape or ignore or ironize life. This is demonstrated by the three main techniques of logotherapy: formation of attitude (shifting the focus from negative to positive), paradoxical intention (ironizing, ridiculing our own fear, wishing for the feared thing), and Socratic dialogue (paying close attention to the patient’s words to help them derive meaning from their experiences). Other techniques are dereflection (transcend-

duha (duhovna dimenzija se suprotstavlja psihičkom, tjelesnom i socijalnom, zbog neke značajne vrijednosti/osobe), autotranscendencija (zaboraviti na samoga sebe, dati prednost nekome ili nečemu do čega nam je stalo) (6,7).

LOGOTERAPIJA I DEMENCIJA

Svatko tko se susreo s umirućim (palijativnim) bolesnikom zna koliko je neophodna psihološka pomoć tom bolesniku, njegovoj obitelji, a također i osobama koje su članovi palijativnog tima (medicinske sestre i tehničari, njegovatelji, psiholozi, fizioterapeuti, liječnici, socijalni radnici...).

Bolesnik s demencijom, osobito u prvim fazama bolesti, dok još može biti svjestan simptoma i prognoze bolesti, prolazi kroz razdoblje straha, brige i ljutnje. Općenito, kod bolesnika u terminalnoj fazi bolesti javlja se strah od smrti, duševna patnja zbog „gubitka smisla", patnja zbog osjećaja otuđenosti i osamljenosti (8,9). Takve je bolesnike potrebno usmjeravati na pozitivne, životne događaje i njihova postignuća, te da nađu mir s prošlošću i prihvate bolest (9). U razgovoru s bolesnikom treba tražiti njegove preostale snage i talente, pa dok još postoje kognitivne i funkcijske sposobnosti, poticati na aktivnosti i to uvijek s usmjeravanjem na nekoga i nešto (3,10). Tako je npr. bolesnica opisivala kako u domu umirovljenika plete šalove za napuštenu djecu i tako u osmišljeno provedenom vremenu, zaboravi na svoju osamljenost i brige (metode: derefleksija, samonadilaženje). U isto vrijeme vježba kogniciju i motoriku. Kod bolesnika s uznapredovalom demencijom, kada je komunikacija gotovo nemoguća, može se dogoditi da prepoznamo „bljesak bistrog razuma" koji nas podsjeti da je pred nama jedinstvena osoba sa svojim cjeloživotnim žalostima, radostima, postignućima, brigama... Pa ako i ne doživimo nikada takav "bljesak", to je osoba koju treba poštovati do

ing the self and focusing on a meaningful goal), changing the thought focus (spiritual dimension opposes the psychological, physical, and social ones because of a significant value/person), self-transcendence (forgetting our self, prioritizing someone or something we care about) (6,7).

LOGOTHERAPY AND DEMENTIA

Anyone who has ever dealt with a dying (palliative) patient knows how crucial psychological help is to that patient, their family, and to the palliative care professionals (nurses, carers, psychologists, physiotherapists, doctors, social workers, etc.).

Patients with dementia, especially in the early stages of the disease, while they can still be aware of the symptoms and prognosis, go through a period of fear, worry and anger. Generally, patients in the terminal stage of their disease experience a fear of death, mental anguish over the "loss of meaning", and suffer because of a sense of alienation and loneliness (8,9). These patients should be directed towards the positive events in life, their accomplishments, as well as towards finding peace with the past and accepting their illness (9).

In conversation with the patient, the logotherapist should search for the patient's remaining strengths and talents. While their cognitive and functional abilities are still present, activities should be encouraged and always directed toward someone or something (3,10). For example, a patient at a nursing home has described how she knits scarves for abandoned children and by spending her time in that way forgets about her loneliness and worries (techniques: dereflection, self-transcending). At the same time, she practices her cognitive and motor skills. While dealing with patients in the final stages of dementia, when communication is almost impossible, we can recognize a "spark of lucidity" in the patient which reminds us that we face a unique person

njenog zadnjeg trenutka. Zbog čovjekove duhovne dimenzije Frankl naglašava važnost poštovanja prema ljudskom životu do njegovog kraja (5).

Članovi obitelji su s jedne strane zaprepašteni promjenama koje vide u svojim najmilijima; postaju svjesni tijeka i prognoze bolesti te prolaze kroz proces žalovanja jer ih još za vrijeme njihovog života na određeni način gube. S druge strane su iscrpljeni i na njih ljuti, jer je skrb o ovim bolesnicima veliki psihofizički i financijski napor (11). Logoterapija i ovdje nudi (supružniku ili djeci bolesnika s demencijom) da prepoznaju „sudbinsko" (pojava demencije u obitelji) i „slobodan prostor" u kojem traže najsmisleniju mogućnost djelovanja. Upućuje ih da se usredotoče na odnos koji još postoji, a ne da žaluju za izgubljenim. Prihvaćanje bolesti člana obitelji, prihvaćanje da o njemu skrbe, odabiranje pozitivnog stava i aktivno traženje novih mogućnosti, umanjuje osjećaj njihove iscrpljenosti (12). Smisao sudbine koju podnosi neki čovjek (sam bolesnik ili član njegove obitelji) je da je on prvo, oblikuje – gdje god je to moguće i drugo, da je podnosi – kad je to nužno. Prema Franklu, život uvijek ima smisla, čak i u patnji i u smrti može se naći smisao samo ako čovjek prema njima zauzme pravilan stav. Modulacija stava terapijska je pomoć kojom se služimo u sudbinskom trpljenju, a derefleksija tehnika kojom se reducira nepotrebno trpljenje i koja sadrži ključ do duhovne čovjekove slobode u kojoj ne trijumfiraju nagoni nego snaga volje i razuma (3,6,7).

Koliko god život s ovim bolesnicima dovodi do iscrpljenosti ukućana, znaju se čuti i drugačija iskustva. Sudjelovanje u odgovornom preuzimanju brige o starijim članovima obitelji mnogima će kasnije biti putokaz u njihovim životima. Tako je jedna snaha dovodeći na pregled dementnog bolesnika s brojnim smetnjama ponašanja spontano prokomentirala kako njihova obitelj „raste kroz ovu si-

with their lifelong sorrows, joys, accomplishments, worries, etc. Even if we never see this "spark", this is still a person deserving of respect until their dying moment. Frankl highlights the importance of respect towards human life until its end because of our spiritual dimension (5).

Family members are stunned by the changes they see in their loved ones. They become aware of the course and prognosis of the illness and go through a grieving process because, in a way, they are losing their loved ones while they are still alive. On the other hand, they are exhausted and angry at them because care for these patients is a great psycho-physical and financial burden (11). Here, logotherapy offers to spouses or children of dementia patients a chance to recognize the "destiny" (dementia in family) and "freedom" to find the most meaningful course of action. It directs them to focus on the still existing relationship, instead of mourning the one they lost. By accepting the disease of their family member, agreeing to take care of them, choosing a positive attitude, and actively seeking new opportunities, they lessen their sense of exhaustion (12). The meaning of a person's destiny (the patient's or their family member's) is, firstly, that the person shapes it - where possible, and secondly, that they bear it - when necessary. According to Frankl, life always has a meaning; meaning can be found even in suffering and death, only if a person chooses the right attitude. Formation of attitude is a therapeutic assistance we use to help with suffering due to destiny, while dereflection reduces unnecessary suffering and holds the key to a person's spiritual freedom in which the strength of will and reason triumph over instincts (3,6,7). As much as life with these patients leads to exhaustion in the household, there have been different experiences as well. For many, participating in responsible care for older family members will serve as guidance later in their lives. For example, a daughter-in-law who brought a dementia patient with behavioural problems for a check-up spontane-

tuaciju". U susretu s teškom bolešću i smrti osoba postaje svjesna ograničenosti života i svjesna svoje odgovornosti te počinje cijeniti svaki dan kao šansu da se još nešto učini, da se ne propusti prilika za razgovor, šetnju, izmirenje... Kada se sve mogućnosti iscrpe, logoterapeut je tu da sluša i dade utjehu, pomogne u procesu žalovanja.

Članovi palijativnog tima svakodnevno se susreću s bolesnicima koji unatoč njihovim naporima ne pokazuju značajnija poboljšanja ili dapače, vrlo brzo psihički i tjelesno propadaju. Ovdje treba dodati i činjenicu da većina ljudi osjeća nelagodu kada se susreće s umiranjem i smrću bolesnika. Osim toga, stresni čimbenici medicinskog osoblja na palijativnom odjelu su nedostatak vremena, nedovoljan broj osoblja, složenost odnosa s bolesnikom, a još više njegovom obitelji koja ponekad ima nerealna očekivanja. Zato ne treba čuditi podatak da se za rad na palijativnom odjelu malotko odlučuje.

U literaturi se kao zaštitni čimbenik u savladavanju navedenih stresova članova palijativnog tima spominje nalaženje smisla u zanimanju te općenito nalaženje smisla života, što proizlazi iz osobina ličnosti (optimizam, samopoštovanje) i pozitivnog stava prema životu. Ove osobe imaju više empatije, svjesnije su života, duhovno orijentirane zbog ponavljanog izlaganja smrti. Naime, brigom za osobe koje su na kraju života stječe se psihološka zrelost koja dovodi do osobnog rasta i dubljeg doživljavanja života (13,14). Frankl govori o ostvarivanju stvaralačkih vrednota na radnom mjestu; tamo gdje se učini nešto osobno, izvan više-manje propisanih dužnosti, tek tamo se otkriva mogućnost da se kroz zanimanje osoba ispuni smislom. Nenadoknadivost i nezamjenjivost, ono neponovljivo i jedinstveno ovisi uvijek o čovjeku, o tome tko radi i kako radi, a ne o tome što radi. Čovjek na svom poslu može postići stvaralačke vrednote i jedinstveno samoostvarivanje (5).

ously commented that their family is "growing through this situation".

When dealing with a serious illness and death, a person becomes aware of the finality of life and of their responsibility. They start to appreciate each day as a chance to do something, not to miss a chance for a conversation, a walk, reconciliation, etc. Once all the possibilities are depleted, the logotherapist is there to lend an ear, to offer comfort, to help in the grieving process.

Palliative care professionals daily deal with patients who, despite their efforts, do not show significant improvement or who deteriorate very quickly both psychologically and physically. Here, it should be added that most people feel uneasy when faced with dying and the death of patients. Additional stress factors of medical professionals at palliative care wards include a lack of time, a shortage of staff, the complexity of the relationship with the patient and of the relationship with their family, who sometimes have unrealistic expectations. Therefore, it is unsurprising that a job at a palliative care ward is not a popular choice.

In the scientific literature, finding the meaning in their vocation and in life in general is mentioned as a measure for overcoming the aforementioned stress in palliative care professionals. Finding meaning stems from their personality traits (optimism, self-respect) and a positive attitude towards life. These individuals feel more alive, empathic, and spiritually oriented because of their repeated exposure to death. Through care for the dying, they become psychologically mature which leads to personal growth and a deeper experience of life (13,14). Frankl speaks of achieving creative values at the workplace; when someone does something personal, beyond their more-or-less defined duties, they reveal the possibility of fulfilment through their vocation. A man is by nature irreplaceable and unique; what matters is who does something and how they do it, not what they do. Humans can discover creative values and self-realization in the workplace (5).

ZAKLJUČAK

U susretu s bolesnikom koji ima demenciju ništa se ne smije izgubiti iz vida: ni somatska, ni psihička, ni duhovna dimenzija. Iako se čini da se na ovom području vrlo malo ili ništa može učiniti, i to malo, bolesniku i njegovoj obitelji može biti značajno. Logoterapeut treba pomoći osobi da se trgne iz nesretnog samosažaljenja. Ako već ne može oblikovati sudbinu, treba joj pravilnim držanjem ići u susret, podići pogled (od patnje), proširiti horizont, usmjeriti se na nekoga i time nadići sebe. Kako bi mogao izdržati u ovom nastojanju, potrebno je svakodnevno graditi svijest o konkretnoj, osobnoj zadaći, o jedinstvenom smislu svog bitka.

CONCLUSION

When dealing with a patient with dementia nothing can be ignored; not the somatic, nor psychological, or spiritual (nosological) dimension. Even though it seems that very little or nothing at all can be done in this aspect, even a little can be significant for the patient and their family. A logotherapist should help a person snap out of their self-pity. If one cannot shape destiny, then they should meet it with their head held high, shift their gaze from suffering, widen their horizon, direct themselves towards someone and, in doing so, transcend themselves. In order to persevere in this effort, they should daily build consciousness about their concrete, personal task, and about the unique meaning of their being.

LITERATURA/*REFERENCES*

1. Zuehlke TE, Watkins JT. The use of psychotherapy with dying patients: An exploratory study. J Clin Psychol 1975; 31(4): 729-32.
2. Breitbart W. Spirituality and meaning in supportive care: spirituality- and meaning-centered group psychotherapy interventions in advanced cancer. Support Care Cancer 2002; 10(4): 272-80.
3. Frankl VE. Nečujan vapaj za smislom. Zagreb: Naprijed, 1987.
4. Frankl VE. The will to meaning. New York: New American Library, 1969.
5. Frankl VE. Liječnik i duša. Zagreb: Kršćanska sadašnjost, 1993.
6. Lukas E. I tvoja patnja ima smisla: Logoterapijska pomoć u krizi. Zagreb: Svjetla točka, 2016.
7. Frankl VE. Patnja zbog besmislena života: Psihoterapija za današnje vrijeme. Đakovo: Karitativni fond UPT, 2011.
8. Noguchi W, Morita S, Ohno T, Aihara O, Tsujii H, Shimozuma K *et al*. Spiritual needs in cancer patients and spiritual care based on logotherapy. Support Care Cancer 2006; 14: 65-70.
9. Morgan JH. Geriatric logotherapy: Exploring the psychotherapeutics of memory in treating the elderly. Psychol Thought 2012; 5(2): 99-105.
10. Kearney M, Mount B. Spiritual care of the dying patient. In: Chochinov H, Breitbart W (eds.) Handbook of palliative medicine. New York: Oxford University Press, 2000, 357-73.
11. Springate BA, Geoffrey Tremont G. Dimensions of Caregiver Burden in Dementia: Impact of Demographic, Mood, and Care Recipient Variables. Am J Geriatr Psychiatry 2014; 22(3): 294-300.
12. Shim B, Barroso J, Gilliss CL, Davis LL. Finding meaning in caring for a spouse with dementia. Appl Nurs Res 2013;26(3): 121-26.
13. Moreno-Milan B, Cano-Vindel A, Lopez-Dóriga P, Medrano AL, Breitbart W. Meaning of work and personal protective factors among palliative care professionals. Palliat Support Care 2019; 17(4): 381-7.
14. Back A, Rushton C, Kaszniak A *et al*. Why are we doing this? J Palliat Med 2015; 18 (1): 26-30.
15. Brat PJ. Logotherapy in the care of the terminally ill. J Relig Gerontol 2001; 11(3): 103-117.

Neurološke promjene u dugovječnosti
/ Neurological Changes in Longevity

Nataša Klepac

Klinički bolnički centar Zagreb, Sveučilište u Zagrebu, Medicinski fakultet, Referentni centar za kognitivnu neurologiju i neurofiziologiju, Zagreb, Hrvatska

/ Clinical Hospital Centre Zagreb, University of Zagreb, School of Medicine, Referral Centre for Cognitive Neurology and Neurophysiology, Zagreb, Croatia

Učestalost neuroloških bolesti kao i njihovo breme postaju rastući problem kao rezultat starenja populacije. Neurološke bolesti povezane su s visokom smrtnošću, invaliditetom, institucionalizacijom i hospitalizacijom a broj ljudi koji boluju od neuroloških bolesti svakim danom sve više raste. Porast učestalosti onesposobljavajućih, neizlječivih neuroloških poremećaja ima poguban utjecaj na bolesnike, obitelji, ali i čitavo društvo, te traženje načina za usporenje njihove progresije i smanjenje učestalosti postaje imperativ. Starenje je povezano s nakupljanjem mnogih patoloških stanja, posebno cerebrovaskularne bolesti, ali i s pojavom neurodegeneracije. U česte neurološke poremećaja koji pogađaju stariju populaciju ubrajamo moždani udar, polineuropatiju, Alzheimerovu bolest i Parkinsonovu bolest. Samo Alzheimerova bolest zahvaća jednu trećinu osoba starijih od 85 godina te se očekuje da se broj oboljelih koji je u 2015. godini procijenjen na 40 milijuna poveća na 135 milijuna do 2050. godine. Svake godine 15 milijuna ljudi širom svijeta doživi moždani udar. Oko 6 milijuna tih ljudi umre u roku od jednog sata, a 5 milijuna bolesnika ostaje trajno onesposobljeno. Incidencija Parkinsonove bolesti raste s godinama i ne pokazuje pad ni u najstarijim dobnim skupinama. Polineuropatija se javlja u 5,5 % starije populacije, njezina prevalencija raste s dobi te je u skupini ispitanika starijih od 80 godina iznosila čak 13,2 %. Epilepsija se relativno češće javlja u starije populacije u usporedbi s djecom i odraslima, a njezina sve veća učestalost u starijih osoba povezana je s porastom različitih etiologija epileptogenih stanja koja mogu predstavljati terapijske ciljeve. Zbog vrhunca incidencije nakon 75. godine starenje globalne populacije u narednim će godinama također rezultirati velikim brojem bolesnika koji boluju od amiotrofične lateralne skleroze.

S obzirom na svjetski trend starenja populacije koji ima za posljedicu povećanu učestalost neuroloških bolesti prevencija i adekvatno zbrinjavanje neuroloških zbivanja postaju javnozdravstveno pitanje.

/ Neurological diseases are becoming more prevalent as the world's population ages, and their burden is expected to increase globally. The number of people living with neurological conditions in the world is rising and will continue to increase. The increase in the frequency of disabling, currently incurable neurologic disorders is likely to have a devastating impact on individuals, families, and societies, unless effective means to reduce the incidence and progression of these diseases are discovered. Moreover, neurological diseases are associated with a high risk for adverse health outcomes, including mortality, disability, institutionalization, and hospitalization. Ageing is associated with accumulation of many pathologies, notably cerebrovascular disease, but also with the emergence of neurodegeneration. Some of the more common neurological disorders that affect older adults include stroke, polyneuropathy, Alzheimer's disease, and Parkinson's disease. Alzheimer's disease alone affects between one-third and one-half of people above 85 years of age; thus, the number of people affected, estimated at 40 million worldwide in 2015, is anticipated to increase to 135 million by 2050. Every year, 15 million people worldwide suffer a stroke. About 6 million of these people die within hours, and another 5 million are left disabled. The prevalence of Parkinson's disease increases with age, with no levelling off in the highest age categories. Polyneuropathy occurs in 5.5% of the elderly population and increases with age with a prevalence of 13.2% in the group of people over the age of 80. Epilepsy is comparatively more frequent in the older population compared with children and adults, and its increasing incidence in the elderly is related to the rise in age-related epileptogenic conditions with specific underlying pathophysiological mechanisms that may represent therapeutic targets. Because of a peak of

incidence around after 75 years of age, ageing of the global population will also result in a great increase in the number of patients suffering from amyotrophic lateral sclerosis in the coming years.

Since the aging population is a real public health issue, it is essential to identify the incidence and prevalence of neurologic diseases in the elderly population in order to develop strategies for prevention and management.

ADRESA ZA DOPISIVANJE / *CORRESPONDENCE*:
prof. dr. sc. Nataša Klepac, dr. med.
Referentni centar za kognitivnu neurologiju i neurofiziologiju
Klinički bolnički centar Zagreb
Kišpatićeva 12
10 000 Zagreb, Hrvatska
E-pošta: natasa.klepac@gmail.com

KLJUČNE RIJEČI / *KEY WORDS*:
Demencija / *Dementia*
Cerebrovaskularna bolest / *Cerebrovascular Disease*
Parkinsonova bolest / *Parkinson's Disease*
Populacijske studije / *Population Surveys*

TO LINK TO THIS ARTICLE: https://doi.org/10.24869/spsih.2019.351

UVOD

Starenje populacije je demografski fenomen s velikim posljedicama u različitim sektorima. Prema podatcima iz 2017. godine broj ljudi starijih od 60 godina do 2050. godine udvostručit će se od 962 milijuna u 2017. na 2,1 milijardu 2050. godine. Najstariji udio stanovništva koje predstavlja populacija starija od 80 godina u istom će se razdoblju utrostručiti sa 137 milijuna u 2017. na 425 milijuna 2050. godine (1). Starenje stanovništva rezultira snažnim porastom broja bolesnika, jer se očekuje da se učestalost većine bolesti povećava s dobi. Kako bi se te bolesti mogle pravodobno liječiti te potencijalno prevenirati, osnovno je otkriti njihove čimbenike rizika. Kao odgovor na ovaj problem koji je novonastao u svjetlu aktualnih demografskih promjena provedene su prospektivne studije praćenja zdrave populacije. Rezultati tih istraživanja su pokazali usku povezanost između životne dobi i učestalosti mnogih neuroloških poremećaja te nametnuli zaključak da je upravo neurologija medicinska disciplina na koju starenje stanovništva ima poseban utjecaj. Štoviše, neurološki i psihijatrijski poremećaji

INTRODUCTION

The increase in the number of elderly people of the world population is an ongoing worldwide phenomenon with major implications in many different sectors. According to the World Population Prospects: the 2017 Revision, the number of people over 60 will more than double by 2050 – from 962 million in 2017 to 2.1 billion in 2050. The oldest segment of the population, that is, people over 80 years of age, is expected to triple over this period, from 137 million in 2017 to 425 million in 2050 (1). As a response to the demographic changes that lead to an increase of the proportion of elderly people in most populations, several prospective follow-up studies have been conducted. It is clear that the aging of the population will produce a strong rise in the number of elderly people living with diseases, as most diseases cluster at the end of life, and that to discover the causes of diseases in the elderly one would have to study risk factors of those diseases. Results showed that there is the close relationship between age and the incidence of many neurological disorders, and that neurology is a medical

bili su najvažniji uzroci invalidnosti u starijih osoba (2). Socioekonomski teret neuroloških bolesti naglo raste starenjem stanovništva i stalnim porastom očekivanog trajanja života širom svijeta te nedavna studija procjenjuje da globalni troškovi iznose više od 2 % svjetskog bruto društvenog proizvoda. Očekuje se da će se s obzirom na demografske promjene ovaj trend dalje nastaviti (3). Javno zdravstveni izvještaji Velike Britanije za 2018. godinu *"Neurology Mortality"* pokazao je trend porasta smrtnosti od neuroloških bolesti za 39 % tijekom 13 godina, dok je smrtnost populacije u istom razdoblju pala za 6 % (4). Kao posljedica navedenih promjena danas postoji tendencija da se neurološke bolesti proglase javno zdravstvenim prioritetima.

NEUROLOŠKI POREMEĆAJI U STARIJOJ POPULACIJI

Starenje populacije rezultira povećanim brojem određenih neuroloških bolesti, ali pri tome ne treba izgubiti iz vida da učestalost pojedinih neuroloških zbivanja ne prati porast životne dobi. Neki od neuroloških poremećaja, poput glavobolje, uobičajeni su u populaciji tijekom života, ali se njihova učestalost ne povećava u starijoj životnoj dobi. Naprotiv, pojedina zbivanja poput migrene češća su u mlađoj životnoj dobi tako da bolesnica koja je imala učestale napade migrene u dobi iznad 60 godina može imati znatno rjeđe napade ili napadi mogu u potpunosti izostati. Starenje je povezano s nakupljanjem mnogih patologija, posebno u sklopu cerebrovaskularne bolesti, ali i s pojavom neurodegeneracije. Neki od češćih neuroloških poremećaja koji pogađaju starije osobe su moždani udar, polineuropatije, Alzheimerova i Parkinsonova bolest.

Svake godine 15 milijuna ljudi širom svijeta dobije moždani udar. Oko 6 milijuna ljudi s moždanim udarom umre u roku od jednog sata, a 5 milijuna ima trajni deficit. U Rotterdamskoj

discipline that will be particularly impacted by the ageing population. Moreover, neurological and psychiatric disorders were the most important causes of disability in the elderly (2). Recent estimates indicate that the global costs of neurologic illnesses total more than 2% of the annual world gross domestic product. This socioeconomic burden is expected to grow steeply with the ageing of populations and continuing increase in life expectancy worldwide (3). England's 2018 public health Neurology Mortality reports show that the number of deaths in England related to neurological disorders rose by 39% over 13 years, while deaths in the general population fell by 6% over the same period (4). As a result, this has led to widespread calls for declaring these diseases a global health priority.

TYPE OF NEUROLOGICAL DISORDER COMMON IN ELDERLY POPULATION

Accelerated ageing will be accompanied by a rise in the number of patients affected by certain neurological disease, but not all neurological conditions rise with advanced age. Some neurological disorders, such as headache, are common in the global population during the course of life but are not frequently encountered in the population of the elderly. Ageing is associated with accumulation of many pathologies, notably cerebrovascular disease, but also with the emergence of neurodegeneration. Some of the more common neurological disorders that affect older adults include stroke, polyneuropathy, Alzheimer's disease, and Parkinson's disease.

Every year, 15 million people worldwide have a stroke. About 6 million of these people die within hours, and another 5 million are left disabled. In a Rotterdam study, which included 6.844 participants who were over 55 years of age and free from stroke that during the study, showed that 1.020 strokes occurred among the

studiji u kojoj je praćeno 6.844 sudionika starijih od 55 godina i bez znakova moždanog udara tijekom praćenja, 1.020 osoba je razvilo moždani udar (5). Analiza registra moždanih udara Dijon pokazala je da će do 2030. godine doći do očekivanog porasta ukupnog broja slučajeva moždanog udara za 55 %, pri čemu će ovo povećanje uvelike utjecati na porast slučajeva koji pogađaju starije osobe (65 %-tna učestalost u populaciji starijoj od 75 godina u odnosu na 25 %-tnu učestalost u ljudi mlađih od 75 godina), što ima velike posljedice u pogledu buduće organizacije zdravstvene skrbi i potrebe za resursima (6).

U današnjim društvima koja su obilježena starenjem populacije demencija je jedan od glavnih zdravstvenih problema. Učestalost demencije je visoka kod starijih osoba i to posebno u populaciji vrlo starih ljudi. Dosadašnja istraživanja su pokazala da je 9 % ispitanika u dobi od 65 godina i više dementno za razliku od 34 %, ako se gleda životna dob od 85 i više godina. Od svih slučajeva demencije 72 % bilo je uzrokovano Alzheimerovom bolešću. Iz dosadašnjih rezultata se neminovno nameće zaključak da je izražen porast prevalencije demencije s godinama posljedica značajnog porasta Alzheimerove bolesti. Rezultati velike EURODEM studije kojom je obuhvaćeno čak 28.768 osoba dokazali su da učestalost demencije i Alzheimerove bolesti ne prestaje rasti s dobi te se i dalje povećava u populaciji ljudi u dobi od 85 do 90 godina (7-9).

Učestalost Parkinsonove bolesti, druge po učestalosti neurodegenerativne bolesti, povećava se s dobi, prateći isti trend i u najvišim dobnim kategorijama i bez značajnih spolnih razlika. Podatci o prevalenciji prema objavljenoj epidemiološkoj studiji bili su 0,3 % za one u dobi od 55 do 64 godine, 1,0 % za skupinu u dobi od 65 do 74 godine, 3,1 % za skupinu od 75 do 84 godine, i 4,3 % za skupinu od 85 do 94 godina. U najstarijoj skupini između 95 do 99 godina prevalencija je bila 5,0 % (10).

participants (5). Analysis of the Dijon Stroke Registry demonstrated that there "will be an anticipated 55% increase in the total annual number of stroke cases by 2030, this increase being largely driven by a rise in cases affecting elderly people (65% in people ≥75 years old versus 25% in those < 75 years old), with major implications in terms of future care organization and resource needs" (6).

Dementia is one of the major health problems in aging societies. Dementing disorders are common in elderly and, especially, very old people. According to existing studies, 9% of subjects aged 65 and above and 34% of subjects aged 85 and over had dementia. Of all cases of dementia, 72% were cases of Alzheimer's disease. It was concluded that the pronounced increase in the prevalence of dementia with age was due to a substantial increase in Alzheimer's disease. The EURODEM study that included 28.768 person found that the incidence of dementia and Alzheimer's disease does not cease to increase with age and continues to increase in the population aged between 85 and 90 (7-9).

The prevalence of Parkinson' disease increased with age with no levelling off in the highest age categories and no significant gender difference. According to a published epidemiological study, the prevalence figures "were 0.3% for those aged 55 to 64 years, 1.0% for those 65 to 74, 3.1% for those 75 to 84, and 4.3% for those 85 to 94" and among "95- to 99-year-old women the prevalence was 5.0%" (10).

Polyneuropathy occurs in 5.5% of the elderly population and increases with age. The results of the study clearly showed that when investigating those over the age of 80, 13.2% of participants had polyneuropathy. Almost half of the cases were newly diagnosed, indicating that the presence of polyneuropathy is underreported or underdiagnosed in almost half of these persons (11).

Epilepsy is comparatively more frequent in the older population when compared with children

Polineuropatija se javlja s prevalencijom od 5,5 % u starijoj populacije s trendom povećanja starenjem te u skupini ispitanika starijih od 80 godina prevalencija je bila čak 13,2 %. Ista studija je također dokazala da je gotovo polovica slučajeva bila novo dijagnosticirana, što ukazuje da je prisutnost polineuropatije u gotovo velikom broju populacije neprepoznata i nedijagnosticirana (11).

Učestalost epilepsija je relativno veća u starijoj populaciji u usporedbi s djecom i odraslima. Sve veća učestalost epilepsije u starijih osoba povezana je s porastom različitih etiologija čija učestalost raste s dobi (12). Zbog vrhunca incidencije nakon 75. godine, starenje globalne populacije u narednim će godinama također rezultati velikim brojem bolesnika koji boluju od amiotrofične lateralne skleroze (13).

Neurološka zbivanja dijele mnoge čimbenike rizika te vrlo često bolesnik s jednim neurološkim zbivanjem tijekom vremena razvija i drugo neurološko zbivanje. Bolesnici koji boluju od moždanog udara imaju povećani rizik za demenciju, bolesnici koji boluju od demencije imaju povećani rizik za moždani udar, što potvrđuje *Framingham Heart* studija. Pojava jedne bolesti (npr. moždani udar) uzrokuje razvoj etiologije kao posljedice primarnog uzroka (npr. demencije nakon moždanog udara). Osim navedenog pojedini čimbenici rizika (npr. hipertenzija) nisu povezani samo s povećanom učestalošću neuroloških bolesti već i s povećanim mortalitetom od drugih uzroka (npr. srčanih bolesti) (14).

POSEBNOSTI NEUROLOŠKIH BOLESTI U STARIJIH OSOBA

Kliničari trebaju biti upućeni u posebnosti neuroloških bolesti u starijih osoba uključujući različite kliničke manifestacije, specifične uzroke i prilagođeni terapijski pristup. Starenje samo po sebi nije bolesno stanje, ali može biti u inter-

and adults, and its increasing incidence in the elderly is related to the rise in age-related epileptogenic conditions with specific underlying pathophysiological mechanisms that may represent therapeutic targets (12). Because of a peak of incidence around after 75 years of age, ageing of the global population will also increase the number of patients suffering from amyotrophic lateral sclerosis in coming years (13).

These common neurological diseases share many risk factors and subsequently tend to show substantial co-occurrence, with stroke and parkinsonism patients at increased risk of dementia, and patients with dementia at increased risk of stroke. Framingham Heart Study reported lifetime risks of both dementia (1 in 5 women, 1 in 10 men) and stroke (1 in 5 women, 1 in 6 men). The occurrence of one disease (e.g. stroke) causes the development of etiology as a consequence of primary stroke (e.g. post stroke dementia). Similarly, several risk factors (e.g. hypertension) increase the susceptibility for common neurological diseases and are associated with an increased risk of dying from other causes (e.g. heart disease) (14).

PARTICULARITIES OF NEUROLOGICAL DISEASES IN THE ELDERLY

Clinicians should be aware of some particularities of neurological diseases in the elderly, including different clinical manifestations, specific underlying causes, and tailored management of treatments. Age by itself is not a disease condition but may interact with several aspects of neurological diseases including incidence, clinical expression, or natural evolution. In the case of some neurologic conditions that are present throughout life and remain frequent in the elderly, there is insufficient data about therapeutic approaches in advanced age since most older patients are excluded from large tri-

akciji s nekoliko aspekata neuroloških bolesti, uključujući incidenciju, klinički fenotip i progresiju. O nekim neurološkim stanjima koja su prisutna tijekom života i koja su česta kod starijih osoba nema dovoljno podataka o terapijskom pristupu u starijoj dobi, jer je većina starijih bolesnika isključena iz velikih ispitivanja i često imaju više komorbiditeta i polifarmacije. Ostala neurološka stanja su izraziti klinički fenotip u starijoj dobi i stoga predstavljaju terapijski izazov.

Komorbiditeti u starijih osoba su pravilo, a ne iznimka. Veliko nacionalno istraživanje zdravlja i razvoja u Velikoj Britanije uključilo je u istraživanje osobe rođene 1946. godine i slijedilo ih prospektivno. Rezultati su pokazali da ljudi i u dobi od 60 do 64 godine imaju u prosjeku dvije bolesti: 54 % ih ima hipertenziju, 31 % pretilost, 26 % hiperkolesterolemiju i 25 % dijabetes melitus ili smanjenu toleranciju glukoze. S druge strane, samo 15 % osoba nije imalo komorbiditeta. U neselektiranom uzorku pojedinaca starijih od 85 godina učestalost hipertenzije, osteoartritisa, ateroskleroze i katarakte bila je oko 50 %, a otprilike je 90 % ispitanika imalo tri ili više bolesti (15).

MOGU LI SE SPRIJEČITI NEUROLOŠKI POREMEĆAJI?

Broj bolesnika koji boluju od neuroloških poremećaja kao i posljedično opterećenje zdravstvenog sustava povezano je s dva demografska fenomena: starenje i porast broja stanovnika. Stoga je ključno razviti strategije za njihovu prevenciju (16). Prvi korak je kontrola čimbenika rizika poput pušenja, visokog krvnog tlaka, visokog kolesterola, pretilosti i nedostatka tjelovježbe koja može pridonijeti moždanom udaru i eventualno drugim neurološkim problemima. Posljednjih godina postalo je jasno da su kardiovaskularni čimbenici rizika i niska edukacija također čimbenici rizika za razvoj demencije. Rezultati prospektivne Roterdam-

als and often have multiple comorbidities and polypharmacy. Other neurologic conditions present with a distinct clinical phenotype in older age and therefore represent a therapeutic challenge.

Comorbidities in elderly people are the rule rather than the exception. Thus, in the MRC National Survey of Health and Development, a representative UK sample included those born in 1946 and followed them prospectively. Results showed that by the age of 60–64 the participants had on average two medical conditions: 54% had hypertension, 31% obesity, 26% hypercholesterolemia, and 25% either diabetes mellitus or impaired glucose tolerance. By contrast, only 15% were free from any comorbidity. In an unselected sample of individuals over the age of 85, the prevalence of hypertension, osteoarthritis, atherosclerosis, and cataract were each around 50%, and ~90% had three or more conditions (15).

CAN NEUROLOGICAL DISORDERS BE PREVENTED?

In terms of absolute number of people affected by neurological disorders, most of the increase in the burden of neurological diseases was associated with ageing of the population and population growth. Therefore, it is essential to develop strategies for their prevention (16). The first step is controlling risk factors such as smoking, high blood pressure, high cholesterol, obesity, and lack of exercise, which can contribute to stroke, and possibly other neurological issues. In recent years, it has become clear that cardiovascular factors and low education are risk factors of dementia. The results of the prospective Rotterdam study showed that about one quarter to one third of dementia cases could potentially be prevented through optimal prevention or treatment of cardiovascular risk factors and diseases and the improvement of the educational level (17). As advocated by the recent

ske studije su dokazali da se oko četvrtine do jedne trećine slučajeva demencije potencijalno može spriječiti optimalnom prevencijom ili liječenjem kardiovaskularnih čimbenika rizika i poboljšanjem obrazovne razine (17). Prema nedavno objavljenom svjetskom izvještaju o Alzheimerovoj bolesti, većina tih čimbenika potencijalno se može modificirati, što pruža mogućnost za prevenciju demencije (18). Podatci iz Roterdamske studije su pokazali da se oko polovine slučajeva moždanog udara u populaciji može pripisati kombinaciji nekoliko etioloških čimbenika: hipertenziji, pušenju, dijabetesu, fibrilaciji atrija, srčanim bolestima i prekomjernoj težini / pretilosti. Autori su zaključili da se većina moždanih udara može pripisati utvrđenim etiološkim faktorima koji se mogu modificirati i da bi se teorijski mogla smanjiti učestalost moždanih udara uklanjanjem tih čimbenika rizika u populaciji (19).

Rezultati prospektivnih studija pokazuju da preventivne strategije koje odgađaju nastanak moždanog udara, demencije i Parkinsonove bolesti za 1 do 3 godine mogu smanjiti učestalost ovih stanja za 20 – 50 %. Ovi rezultati idu u prilog važnosti prevencije kako bi se smanjio trenutni i budući pobol neuroloških bolesti u starijoj populaciji (20).

Nedavna velika studija pokazala je pad u trendu incidencije demencije u stanovništvu koje živi u zemljama s visokim dohotkom što je protumačeno kao početni rezultat preventivnih strategija. Ovo nameće zaključak da je boljom kontrolom vaskularnih čimbenika rizika, poboljšanjem obrazovanja kao i drugim mjerama u okviru javnog zdravstva smanjena prevalencija demencije (21).

ZAKLJUČAK

Produženi životni vijek i porast udjela starije populacije je demografski fenomen posljednjih godina prisutan širom svijeta zbog čega sve

World Alzheimer report, most of these factors are potentially modifiable, which provides an opportunity for prevention of dementia (18). Data from the Rotterdam study found that about half of the strokes in the study population were attributable to a combination of several etiological factors: hypertension, smoking, diabetes, atrial fibrillation, heart disease, and excess weight/obesity. Authors concluded that the majority of the strokes were attributable to established modifiable etiological factors and could theoretically be prevented by eliminating these risk factors from the population (19).

Prospective studies that were designed to investigate the causes and consequences of long-term and disabling diseases in the elderly suggested that preventive strategies that delay disease onset of stroke, dementia, and Parkinson's disease by 1–3 years have the potential to reduce these risks by 20–50%. These findings strengthen the call for a focus on prevention to reduce the current and projected burden of common neurological diseases in the ageing population (20).

Recent observations on declining dementia incidence trends from several large population-based studies in high-income countries may in fact reflect the (initial) signs of these preventive strategies through better vascular risk factor management, improved educational attainment, or other public health developments that improved the resilience for dementia (21).

CONCLUSION

Increasing life expectancy and population growth worldwide in recent years mean that more people are now reaching the age in which neurological disorders are most prevalent. Consequently, neurological disorders are a large cause of disability and death worldwide. Globally, the burden of neurological disorders has increased substantially over the past 25

veći broj ljudi doseže dob u kojoj su neurološki poremećaji česti. Posljedično su neurološki poremećaji značajan uzrok invaliditeta i mortaliteta diljem svijeta. Kako bi se spriječilo daljnji porast invaliditeta i mortaliteta bitno je senzibilizirati javnost za prepoznavanje različitih neuroloških stanja te nastojati provoditi mjere prevencije neuroloških bolesti.

years because of population ageing. Raising awareness and informing the public about the lifetime risk of neurological disorders should be encouraged. Preventive measures for the prevention of neurological diseases should be tailored to individual lifetime risk estimates to successfully develop a future prevention programme for common neurological diseases.

LITERATURA/*REFERENCES*

1. United Nations. World Population Prospects: the 2017 Revision: https://esa.un.org/unpd/wpp/Publications/Files/WPP2017_KeyFindings.pdf
2. Hofman A, Grobbee DE, de Jong PT, van den Ouweland FA. Determinants of disease and disability in the elderly: the Rotterdam Elderly Study. Eur J Epidemiol 1991; 7(4): 403-22.
3. Feigin VL, Norrving B, Mensah GA. Global Burden of Stroke. Circ Res 2017; 120(3): 439-48.
4. Public Health England 2018. Deaths associated with neurological conditions in England 2001 to 2014: Data analysis report. Available online at https://www.gov.uk/government/publications/deaths-associated-withneurological-conditions
5. Bos D, Ikram MA, Leening MJG, Ikram MK. The Revised Framingham Stroke Risk Profile in a Primary Prevention Population: The Rotterdam Study. Circulation 2017; 135(22): 2207-9.
6. Béjot Y, Bailly H, Graber M, Garnier L, Laville A, Dubourget L *et al.* Impact of the ageing population on the burden of stroke. The Dijon Stroke Registry. Neuroepidemiology 2019; 52(1-2): 78-85.
7. Ruitenberg A, Ott A, van Swieten JC, Hofman A, Breteler MM. Incidence of dementia: does gender make a difference? Neurobiol Aging 2001; 22(4): 575-80.
8. Andersen K, Launer LJ, Dewey ME, Letenneur L, Ott A, Copeland JR *et al*. Gender differences in the incidence of AD and vascular dementia: The EURODEM Studies. EURODEM Incidence Research Group. Neurology 1999; 53(9): 1992-7.
9. Hoogendam YY, Hofman A, van der Geest JN, van der Lugt A, Ikram MA. Patterns of cognitive function in aging: the Rotterdam Study. Eur J Epidemiol 2014; 29(2): 133-40.
10. De Rijk MC, Breteler MM, Graveland GA, Ott A, Grobbee DE, van der Meche FG *et al*. Prevalence of Parkinson's disease in the elderly: the Rotterdam Study. Neurology 1995; 45(12): 2143-6.
11. Hanewinckel R, Drenthen J, van Oijen M, Hofman A, van Doorn PA, Ikram MA. Prevalence of polyneuropathy in the general middle-aged and elderly population. Neurology 2016; 87(18): 1892-8.
12. Ali A. Global Health: Epilepsy. Semin Neurol 2018; 38(2): 191-9.
13. Marin B, Boumédiene F, Logroscino G, Couratier P, Babron MC, Leutenegger AL *et al*. Variation in worldwide incidence of amyotrophic lateral sclerosis: a meta-analysis. Int J Epidemiol 2017; 46(1): 57-74.
14. Seshadri S, Wolf PA, Beiser A, Au R, McNulty K, White R *et al.* Lifetime risk of dementia and Alzheimer's disease. The impact of mortality on risk estimates in the Framingham Study. Neurology 1997; 49(6): 1498-504.
15. Collerton J, Davies K, Jagger C, Kingston A, Bond J, Eccles MP *et al*. Health and disease in 85 year olds: baseline findings from the Newcastle 85+ cohort study. BMJ 2009*;* 339*:* b4904.doi:10.1136/bmj.b4904.
16. GBD 2015 Mortality and Causes of Death Collaborators. Global, regional, and national life expectancy, all-cause mortality, and cause-specific mortality for 249 causes of death, 1980–2015: a systematic analysis for the Global Burden of Disease Study 2015. Lancet 2016; 388 (10553): 1459-544.
17. de Bruijn RF, Bos MJ, Portegies ML, Hofman A, Franco OH, Koudstaal PJ *et al*. The potential for prevention of dementia across two decades: the prospective, population-based Rotterdam Study. BMC Med 2015; 21(13): 132. doi: 10.1186/s12916-015-0377-5.
18. Alzheimer's Disease International. World Alzheimer Report 2014. Dementia and Risk Reduction: an analysis of protective and modifiable factors. http://www.alz.co.uk/research/world-report-2014.
19. Bos MJ, Koudstaal PJ, Hofman A, Ikram MA. Modifiable etiological factors and the burden of stroke from the Rotterdam study: a population-based cohort study. PLoS Med 2014; 11(4): e1001634. doi: 10.1371/journal.pmed.1001634.
20. De Lau LM, Schipper CM, Hofman A, Koudstaal PJ, Breteler MM. Prognosis of Parkinson disease: risk of dementia and mortality: the Rotterdam Study. Arch Neurol 2005; 62 (8): 1265-9.
21. Shah H, Albanese E, Duggan C, Rudan I, Langa KM, Carrillo MC *et al*. Research priorities to reduce the global burden of dementia by 2025. Lancet Neurol 2016; 15(12): 1285-94.

Liječenje osoba s neurokognitivnim poremećajem – kako poboljšati uvjete liječenja

/ Treatment of People With Neurocognitive Disorder – How to Improve Treatment Conditions

Suzana Uzun[1,2], Oliver Kozumplik[1,2], Ivan Požgain[2], Dubravka Kalinić[1,3], Ninoslav Mimica[1,3]

[1]Klinika za psihijatriju Vrapče, Referentni centar Ministarstva zdravstva Republike Hrvatske za Alzheimerovu bolest i psihijatriju starije životne dobi, Zagreb, [2]Sveučilište Josipa Jurja Strossmayera, Medicinski fakultet, Osijek, [3] Sveučilište u Zagrebu, Medicinski fakultet, Zagreb, Hrvatska

/ [1]*University Psychiatric Hospital Vrapče, Reference Center of Ministry of Health of Republic of Croatia for Alzheimer's Disease and Old Age Psychiatry, Zagreb,* [2]*University Josip Juraj Strossmayer, School of Medicine, Osijek,* [3]*University of Zagreb, School of Medicine, Zagreb, Croatia*

Potrebe i zahtjevi naših bolesnika su primarna briga svih liječnika i medicinskog osoblja te svih zaposlenika u zdravstvenom sustavu. Vrsna medicinska pomoć više je od samog pružanja medicinskih vještina. Humano ponašanje i brižna njega važni su elementi u liječenju naših bolesnika. Daljnji razvoj klinika i bolnica u kojima se liječe osobe s neurokognitivnim poremećajima trebao bi se razvijati u kontekstu cjelokupnog razvoja zdravstvene zaštite osoba s duševnim smetnjama koji se temelji na deinstitucionalizaciji, jačanju zaštite mentalnog zdravlja u zajednici, ali i osuvremenjivanju potrebnih bolničkih kapaciteta i razvoju Referentnog centra kao centra izvrsnosti.

/ The needs and requirements of our patients are the primary concern of all physicians and medical staff, and of all employees in the healthcare system. Good medical care is more than just providing medical skills. Human behaviour and care are important elements in the treatment of our patients. Further development clinics and hospitals that treat people with neurocognitive disorders should develop in the context of the overall development of health care for people with mental disabilities which is based on deinstitutionalization and strengthening mental health care in the community but also updating the necessary hospital capacity and the development of the Referral Centre as a center of excellence.

ADRESA ZA DOPISIVANJE / *CORRESPONDENCE*:
Doc. dr. sc. prim. Suzana Uzun, dr. med.
Klinika za psihijatriju Vrapče
Bolnička cesta 32
10090 Zagreb, Hrvatska
Tel: +385 1 3780 682
E-pošta: suzana.uzun@bolnica-vrapce.hr

KLJUČNE RIJEČI / *KEY WORDS*:
Alzheimerova bolest / *Alzheimer's Disease*
Bolesnik / *Patient*
EU projekti / *EU Projects*
Neurokognitivni poremećaji / *Neurocognitive Disorders*
Referentni centri / *Referral Centres*

TO LINK TO THIS ARTICLE: https://doi.org/10.24869/spsih.2019.359

Potrebe i zahtjevi naših bolesnika su primarna briga svih liječnika i medicinskog osoblja te svih zaposlenika u zdravstvenom sustavu. Vrsna medicinska pomoć više je od samog pružanja medicinskih vještina. Humano ponašanje i brižna njega važni su elementi u liječenju naših bolesnika.

Danas se u liječenju osoba s neurokognitivnim poremećajima primjenjuju najsuvremenije metode psihijatrijskog liječenja - farmakoterapija, različiti oblici psihoterapije, socioterapija, radna i okupacijska terapija i drugo (1-3).

Hrvatski zdravstveni sustav zadnjih se desetljeća susreće s izazovima karakterističnim i za druge europske zemlje: ubrzano starenje stanovništva i produljenje očekivanog trajanja života uz istovremeni snažan razvitak medicinske znanosti i tehnologija u zdravstvu koji sa sobom povlači i značajan porast troškova zdravstvene zaštite. Zbog demografskih promjena mijenja se i zdravstvena slika stanovništva te se u narednim desetljećima očekuje porast broja oboljelih od kroničnih bolesti. Navedeno ima značajan utjecaj na zdravstveni sustav u Republici Hrvatskoj, jer iziskuje njegovu prilagodbu stvarnim potrebama stanovništva (4).

Prema načelu supsidijarnosti zdravstveni problemi trebaju se rješavati na najnižoj razini pružanja zdravstvene zaštite na kojoj je to moguće. Načelo supsidijarnosti u potpunosti je usklađeno s trendom deinstitucionalizacije zdravstvenog sustava, a primjenjuje se počevši od tercijarne razine zdravstvene zaštite kao najsloženijeg oblika zdravstvene zaštite (4).

Klinika za psihijatriju Vrapče Referentni je centar Ministarstva zdravstva Republike Hrvatske za Alzheimerovu bolest i psihijatriju starije životne dobi. Kao što se psihogerijatrija i njen razvoj uopće veže uz Alzheimerovu bolest/demenciju, tako je i razvoj te subspecijalističke psihijatrijske discipline u Hrvatskoj nemoguće odvojiti od Klinike za psihijatriju Vrapče. Temelji psihogerijatrije u Hrvatskoj postavljeni

The needs and requirements of our patients are the primary concern of all physicians and medical staff, and of all employees in the healthcare system. Good medical care is more than justproviding medical skills. Humane behaviourand attentive care are important elements inthe treatment of our patients.

Today, the modern methods of psychiatric treatment are applied in the treatment of people with neurocognitive disorders - pharmacotherapy, different types of psychotherapy, socio-therapy and occupational therapy, etc. (1-3).

In recent decades, the Croatian healthcare system has faced challenges that are characteristic of other European countries: accelerated aging of the population and prolongation of life expectancy with simultaneous strong development of medical science and technology in healthcare, which entails a significant increase in health care costs. Due to demographic changes, the health picture of the population is changing, and the number of patients with chronic diseases is expected to increase in the coming decades. This has a significant impact on the health care system in the Republic of Croatia, since it requires its adaptation to the real needs of the population (4).

According to the principle of subsidiarity, health problems should be addressed at the lowest possible level of health care provision. The principle of subsidiarity is fully in line with the trend of deinstitutionalisation of the health system, and it applies starting with the tertiary level of health care as the most complex form of health care (4).

The University Psychiatric Hospital Vrapče is the Referral Center of the Ministry of Health of the Republic of Croatia for Alzheimer's Disease and Old Age Psychiatry. Just as psychogeriatrics and its development are in general

su 1959. godine kada je u okviru Psihijatrijske bolnice Vrapče, a na inicijativu i nakon dugogodišnjeg zalaganja prim. dr. Velimira Domca, od 1957. godine pripreman, oformljen Odjel za gerontopsihijatriju, kao prvi u ovome dijelu Europe (5). Za budućnost psihogerijatrije u Hrvatskoj od iznimnog je značenja hvalevrijedna inicijativa prof. dr. sc. Vlade Jukića i prof. dr. sc Ninoslava Mimice da se započne s izgradnjom novog i većeg Odjela za psihogerijatriju, koji bi u potpunosti zadovoljio kako svjetske standarde zbrinjavanja osoba starije životne dobi s psihičkim poremećajima tako i sve potrebe suvremene nastave iz psihogerijatrije, koja se na ovoj Klinici već godinama provodi (5,6). Izgradnjom suvremenog objekta za liječenje građana starije životne dobi oboljelih od demencija i ostalih psihičkih poremećaja ostvarit će se uvjeti za rad specijaliziranih dnevnih bolnica koje će omogućiti pravodobno liječenje pacijenata s intencijom smanjenja broja hospitalizacija, usporavanjem progresije bolesti te podizanjem kvalitete života oboljelih i njihovih obitelji.

Nacionalni plan Ministarstva zdravstva predviđa povećanje kapaciteta za palijativnu skrb u bolničkim ustanovama kao jedan od strateških ciljeva razvoja palijativne skrbi u Republici Hrvatskoj (7,8).

Dnevne bolnice u kojima bi se liječile osobe s neurokognitivnim poremećajem omogućuju suvremeni, ekonomičan i multidisciplinaran način liječenja koji znatno poboljšava kvalitetu zdravstvene zaštite. Njihova prednost je da kada za to postoji potreba, dnevne bolnice se osim u sklopu matične ustanove mogu uspostaviti i na odvojenim lokacijama koje su prostorno bliže korisnicima, čime se osigurava veća dostupnost zdravstvene zaštite uz očuvanu kvalitetu pruženih zdravstvenih usluga i značajne financijske uštede za korisnike (npr. putni troškovi u specifičnim situacijama kada se bolnice nalaze na većoj udaljenosti). U dnevnim bolnicama može se osigurati provođenje značajnog broja dijagnostičkih i terapijskih postupaka (8,9).

related to Alzheimer's disease/dementia, so is the development of this sub-specialist psychiatric discipline in Croatia to be separated from the University Psychiatric Hospital Vrapče. The foundations of psychogeriatrics in Croatia were laid in 1959 when, within the framework of the Psychiatric Hospital Vrapče and at the initiative of primarius Dr. Velimir Domac, the Department of Gerontopsychiatry, which had been prepared since 1957, was formed as the first of its kind in this part of Europe (5). For the future of psychogeriatrics in Croatia, of particular value was the initiative of Prof. Vlado Jukić and Prof. Ninoslav Mimica for beginning construction of a new and larger Department of Psychogeriatrics which would fully meet both the world standards of care for the elderly with mental disorders and all the needs of contemporary teaching in psychogeriatrics, which has been implemented at this Hospital for years (5,6). The construction of a modern facility for the treatment of elderly people suffering from dementia and other psychiatric disorders will create conditions for specialized day hospitals that will allow timely treatment of patients with the intention of reducing the number of hospitalizations, slowing the progression of the disease, and raising the quality of life of the patients and their families.

The national plan of the Ministry of Health envisages increasing the capacity for palliative care in hospitals as one of the strategic goals of the development of palliative care in the Republic of Croatia (7,8).

Day hospitals to treat people with neurocognitive disorder allow contemporary, economical and multidisciplinary a treatment that significantly improves the quality of health care. Their advantage is yes when needed, day hospitals do except within the home institution, they can establish separate locations that are closer to the users in space,

Povećanjem primjene modaliteta dnevne bolnice, uz smanjenje akutnih bolničkih postelja, dostupnost bolničkoj zdravstvenoj zaštiti se ne smanjuje, nego se ostvaruje pomak znatnog broja standardnih postupaka prema postupcima dnevne bolnice kojima će se omogućiti suvremen i ekonomičan način liječenja (9). Sve navedeno osigurava bolju kvalitetu zdravstvenih usluga, poboljšavaju se ishodi liječenja te povećava zadovoljstvo pacijenata i pružatelja zdravstvenih usluga (8).

Važna potpora u provedbi opisanog su i bespovratna sredstva iz europskih strukturnih i investicijskih fondova dostupnih Republici Hrvatskoj za financijsko razdoblje od 2014. do 2020., a nastavit će se i u budućnosti (10). Programsku osnovu za iskorištavanje tih sredstava čine usvojeni Operativni program „Konkurentnost i kohezija" i Operativni program „Učinkoviti ljudski potencijali", u kojima je jasno naznačena potreba za reorganizacijom bolničkog sustava s ciljem poboljšanja njegove učinkovitosti i djelotvornosti. U okviru tematskog cilja posvećenog promicanju socijalne uključenosti i borbi protiv siromaštva jedan od investicijskih prioriteta odnosi se na ulaganje u zdravstvenu i socijalnu infrastrukturu koja će pridonijeti nacionalnom, regionalnom i lokalnom razvoju, smanjenju nejednakosti u zdravstvenom statusu, te prelasku s institucionalnih usluga prema zdravstvenim uslugama u zajednici (10,11).

Uz pretpostavku da su svi drugi parametri jednaki, kraći boravak pacijenata na klinikama i u bolnicama osigurava smanjivanje troškova liječenja i omogućava preusmjeravanje pružanja zdravstvene zaštite s akutnih kapaciteta prema financijski povoljnijim oblicima postakutne zdravstvene zaštite (4). Ipak, kraći boravci na Klinici podrazumijevaju intenzivnije pružanje zdravstvene zaštite, što ponekad povećava troškove po danu boravka na Klinici što treba uzeti u obzir pri planiranju i radu.

Akutno liječenje, liječenje u dnevnoj bolnici i dugotrajno liječenje tri su osnovna i komplemen-

thus providing a larger availability of health care while being preserved quality of health services provided and financial savings for users (eg travel expenses in specific situations when hospitals are located at a greater distance). A significant number of diagnostic and therapeutic procedures can be ensured at day hospitals (8,9).

By increasing the use of day hospital modalities with simultaneous reduction of acute hospital beds, accessibility to hospital health care is not diminished but rather a shift is made to a considerable number of standard procedures according to day hospital procedures through which modern and cost-effective treatment will be provided (9). All of these ensure better quality of health services, improve treatment outcomes, and increase patient and provider satisfaction (8).

And important source of support for the implementation of this is and will remain the grants from the European Structural and Investment Funds available to the Republic of Croatia for the 2014-2020 financial period, which will continue in the future (10). The program basis for the utilization of these funds is the adopted Operational Program "Competitiveness and Cohesion" and the Operational Program "Effective Human Resources", which clearly state the need for reorganizing the hospital system in order to improve its efficiency and effectiveness. Within the thematic objective of promoting social inclusion and combating poverty, one of the investment priorities is related to investment in health and social infrastructure that will contribute to national, regional, and local development, reduce inequalities in health status, and move from institutional services to health services in the community (10,11).

Assuming all other parameters are equal, shorter patient stay at clinics and at provides hospitals with reduced cost of care. It also allows

tarna modaliteta bolničkog liječenja, a njihovim uravnoteženjem pacijentima pružamo najprimjereniju zdravstvenu zaštitu, diferenciranu prema njihovu zdravstvenom stanju i potrebama (4).

Pacijenti u bolnicama i klinikama često osjećaju strah i nelagodu ne samo zbog toga što im je zdravlje narušeno, već i zbog nedostatka sigurnosti koju im pruža boravak u poznatom okruženju i kontakti s bližnjima. Sva ta negativna razmišljanja dovode do povećanja stresa, što može biti uzrok pada imuniteta, a samim time i otežanog oporavka pacijenta.

Upravo je stoga potrebno voditi više računa o izgledu i namještanju bolesničkih soba, sanitarnih čvorova i drugih prostorija u kojima borave bolesnici, gdje se uz minimalne troškove može znatno poboljšati kvaliteta boravka tijekom liječenja, te zadovoljstvo bolesnika liječenjem, čime se poboljšava njihova motiviranost za liječenje, ali istovremeno i olakšava i unaprjeđuje bolničko liječenje. Svim je bolesnicima potrebno omogućiti primjerene uvjete za liječenje (12,13).

Kako bi se u prostoru stvorilo pozitivno terapijsko okruženje za liječenje bolesnika s neurokognitivnim poremećajima potrebno je imati na umu sljedeće čimbenike: smanjenje buke, neprikladnog osvjetljenja, loše kvalitete zraka, neudobnog namještaja, neprikladne sheme boja. Potrebno je poraditi na zvučnoj izolaciji soba, obradi podova materijalima koji ne uzrokuju buku. Tijekom dana treba omogućiti prirodno osvjetljenje gdje god je moguće ili umjetno bijelo svjetlo, a tijekom noći, gdje god to omogućuju uvjeti liječenja, u sobama treba vladati potpuni mrak, eventualno može biti upaljeno blago noćno svjetlo koje olakšava kretanje. Potrebno je koristiti udoban namještaj od kvalitetnih materijala (nezapaljivi materijali, površine i tkanine koje se lako čiste i otporne su na agresivna sredstva za čišćenje, ne upijaju prolivenu tekućinu). Potrebno je koristiti boje koje donose smirenje, sigurnost i opuštanje (namještaj u svijetlim bojama drva (javor, bukva, hrast, itd.), zidovi - nježne pastelne nijanse

the provision to be diverted health care from acute capacities towards more affordable forms of post-acute care (4). horter stays, though at the Clinic they mean more intensive provision of health care, which sometimes increases expenses per day of stay at the Clinic to consider when planning and operating.

Acute treatment, day hospital treatment and ong-term treatment are three basic and complementary modalities of hospital treatment, and by balancing them with patients the most appropriate health care, differentiated according to their health status and needs (4).

Patients in hospitals and clinics often feel fear and discomfort not only because their health is impaired but also because of the lack of security which they acquire by staying in a familiar environment and in contact with loved ones. All these negative thoughts lead to an increase in stress, which can be a cause of a fall in immunity and thus impede the patient's recovery.

That is why more attention should be paid to the appearance and placement of patient rooms, toilets, and other rooms where patients stay, where minimal cost can significantly improve the quality of stay during treatment and patient satisfaction, thus improving patient motivation for treatment and facilitating and enhancing hospital treatment. All patients should be provided with appropriate treatment conditions (12,13).

In order to create a positive therapeutic environment in a room for the treatment of a patient with neurocognitive impairment, the following factors must be kept in mind: noise reduction, inadequate lighting, poor air quality, uncomfortable furniture, and inappropriate colour combinations. It is necessary to work on sound insulation of rooms and use of flooring materials that do not produce noise. During the day, natural light or artificial white light

i topli zemljani tonovi). Također, važno je da bolesnici iz prostorija u kojima borave imaju pogled na prirodni okoliš, a da u prostorijama u kojima borave budu slike i fotografije opuštajućih pejzaža, opuštajuća glazba, prostor za molitvu, te knjige i časopisi (13). Važna je i mogućnost šetnje uređenim bolničkim parkom. Na svakom je odjelu potrebno osigurati prostor u kojem bolesnici mogu neometano razgovarati sa članovima obitelji i drugim posjetiteljima. Važno je, također, osigurati dječji kutak s igračkama, npr. u čekaonici.

Potrebno je osigurati smještaj bolesnika u sobama s najviše četiri kreveta, a po mogućnosti što više dvokrevetnih soba u kojima bolesnici imaju veći osjećaj privatnosti i ugodnije se osjećaju, što ima pozitivan učinak na njihovo raspoloženje i ukupan terapijski proces.

Kada god je to moguće potrebno je omogućiti pacijentima prilagođavanje okoline svojim potrebama (TV, radio, klima, svjetlo za čitanje). Edukacija bolesnika o njihovoj bolesti, te o mogućnostima liječenja neizostavan je dio liječenja. U tom smislu potrebno je osigurati prostore opremljene literaturom i internetom u kojima pacijenti mogu istraživati o svom stanju i mogućnostima liječenja te o drugim temama njihovog interesa (13).

U liječenju osoba s neurokognitivnim poremećajima na učinkovit i racionalan način trebaju se provoditi mjere zaštite i unaprjeđenja zdravlja te liječenje i rehabilitacije bolesnika pri čemu se uvijek treba voditi znanstveno utemeljenim spoznajama. Bolesniku treba dati središnju i aktivnu ulogu, a pristup bolesniku, njegovoj obitelji i osobama od povjerenja treba se temeljiti na visokim etičkim i moralnim normama.

Grupnu i individualnu psihoterapiju ambulantnih i bolnički liječenih bolesnika trebaju provoditi osim psihijatara i svi stručnjaci (psiholozi, socijalni pedagozi, socijalni radnici, ali i radni terapeuti i visoko obrazovane medicinske sestre) koji su educirani iz pojedinih psihoterapijskih tehnika. U terapijski proces potrebno

should be provided wherever possible, and during the night, where treatment conditions allow, rooms should be completely dark, with a faint night light left on to facilitate movement. Comfortable furniture made of quality materials should be used (non-flammable materials, surfaces and fabrics that are easy to clean, are resistant to aggressive cleaning agents, and do not absorb spilled liquid). Colours that bring calm, security, and relaxation (furniture in light wood colours, such as maple, beech, oak, etc., walls in delicate pastel shades and warm earth tones) should be used. It is also important that patients have a view of the natural environment from the rooms in which they reside, and that the rooms have pictures and photographs of relaxing landscapes, relaxing music, a prayer space, and books and magazines (13). The ability to walk around a well-maintained hospital park is also important. Each ward should be provided with a space where patients can talk freely with family members and other visitors. It is also important to provide a children's playground with toys, e.g. in the waiting room.

It is necessary to provide for the accommodation of patients in rooms with a maximum of four beds, and preferably as many double rooms as possible in which patients have a greater sense of privacy and are more comfortable, since this has a positive effect on their mood and the overall therapeutic process.

Whenever possible, patients should be able to adapt their environment to their needs (TV, radio, air conditioning, reading light). Educating patients about their illness and treatment options is an indispensable part of treatment. In this regard, it is necessary to provide literature and Internet facilities in which patients can research their condition and treatment options and other topics of their interest (13).

je uključivanje svih stručnjaka, jer prekomjerno, ali i nedovoljno radno opterećenje zdravstvenih radnika posebice liječnika u bolničkim djelatnostima ima podjednako nepovoljan učinak na kvalitetu i ishode liječenja. U uvjetima prekomjernog opterećenja povećavaju se rizici od pogrešaka radnika zbog umora ili smanjene koncentracije, a u uvjetima nedovoljnog radnog opterećenja povećavaju se rizici od pogrešaka zbog nedostatka iskustva ili stečenih vještina. Upravo zato potrebno je ujednačiti radno opterećenje i tako smanjiti rizik od pogrešaka zbog prekomjernog ili nedovoljnog radnog opterećenja. Promjenom modaliteta pružanja zdravstvene zaštite osigurava se bolja komunikacija među zdravstvenim radnicima, ubrzava protok informacija i razmjena iskustava te okruženje pozitivnog natjecanja. Stvaraju se preduvjeti za standardizaciju postupaka, jednoobrazno postupanje i smanjenje varijabilnosti u kvaliteti zdravstvene zaštite, osobito izradom i primjenom zajedničkih kliničkih smjernica i sustava informacijske i komunikacijske tehnologije.

Od osobite je važnosti promicanje zdravih stilova života, razvijanje pravilnih prehrambenih navika, utjecanje na povećanje tjelesne aktivnosti, promicanje edukacije o načinu borbe sa stresom i nasiljem te ukazivanje na štetnost raznih oblika ovisnosti. Poticanjem razvoja zdravih stilova života utjecat će se na kvalitetu života i životni vijek, smanjenje pojavnosti kroničnih nezaraznih bolesti kao i nekih malignih bolesti. Pacijentu i njegovoj obitelji osigurava se središnja pozicija u zdravstvenom sustavu i procesu liječenja te osnažuje uključivanje udruga pacijenata u donošenju odluka o ključnim zdravstvenim uslugama. U tom smislu svrha fizioterapijske intervencije u liječenju psihijatrijskih bolesnika je optimizirati razinu tjelesne funkcije uzimajući u obzir međudjelovanje tjelesne, psihološke, socijalne i profesionalne domene funkcionalnosti (14).

Kako bi prethodno navedeno moglo realizirati značajne aktivnosti u klinikama i bolnica-

The patient should be given a central and active role, and access to the patient, his or her family, and persons of trust should be based on high ethical and moral standards.

Group and individual psychotherapy of outpatients and hospital patients should be performed by not only psychiatrists but all other professionals (psychologists, social pedagogues, social workers, but also occupational therapists and highly educated nurses) who have training in particular psychotherapy techniques. Involvement of all experts in the therapeutic process is necessary because both excessive and insufficient workload of healthcare professionals, especially doctors in hospital activities, has an equally adverse effect on the quality and outcomes of treatment. Excessive workloads increase the risk of employees' mistakes due to fatigue or reduced concentration, while insufficient workloads increase the risk of mistakes due to lack of experience or skills. It is of particular importance to promote healthy lifestyles, develop proper eating habits, influence the increase of physical activity, promote education on how to deal with stress and violence and point out the harmfulness of various forms of addiction. Encouraging the development of healthy lifestyles will affect the quality of life and life expectancy, reducing the incidence of chronic non-communicable diseases as well as some malignancies. In this regard, the purpose of physiotherapy intervention in the treatment of psychiatric patients is to optimize the level of physical function while taking into account the interaction of physical, psychological, social, and professional domains of functionality (14).

In order to realize the above, significant activities in the clinics and hospitals now and in the the future must relate to the planning, preparation and implementation of projects co-financed by EU funds and other forms of

ma sada i u budućnosti moraju se odnositi na programiranje, pripremu i provedbu projekata sufinanciranih sredstvima iz fondova Europske unije i ostalih oblika međunarodne suradnje, kao i na detaljnoj razradi područja ulaganja i definiranju potencijalnih korisnika u području zdravstva za korištenje europskih strukturnih i investicijskih fondova (ESI fondova), savjetovanje u okviru partnerskih odnosa, praćenju i vrednovanju pokazatelja, pripremi zalihe projekata, informiranju i promidžbi (11).

Posljednjih deset godina u svijetu i u zapadnoj Europi koristi se TMS u liječenju psihičkih i neuroloških bolesti te u rehabilitaciji bolesnika. Unazad deset godina značajan je broj recentnih publikacija objavljenih u stručnim časopisima koje potvrđuju učinkovitost uz minimalne nuspojave navedene terapije. Razumije se da usluge klinika i bolnica moraju biti dostupne kako bolničkim tako i vanbolničkim bolesnicima i to i u dijagnostičkom i terapijskom smislu (15).

Terapijska metoda *neurofeedback* pokazala se korisnom u liječenju osoba s duševnim poremećajima pa tako i u liječenju osoba s neurokognitivnim poremećajima. Riječ je o terapijskoj metodi temeljenoj na praćenju električne aktivnosti mozga (EEG-a) i davanju povratne informacije. Naime, neki poremećaji povezani su sa specifičnim obrascima moždane aktivnosti. Pomoću ove metode moguće je trajno promijeniti »loše» obrasce i jednostavno naučiti mozak da funkcionira bolje, te time smanjiti ili u potpunosti ukloniti simptome poremećaja kao što su: poremećaj pažnje/hiperaktivni poremećaj (ADHD), poremećaj raspoloženja (depresije); poremećaj spavanja (nesanice, teško usnivanje, često buđenje), tjeskobe i različiti strahovi; stres i otklanjanje posljedica stresa; loše koncentracije; poteškoće u učenju; glavobolja i migrena. Iako je tehnologija vrlo sofisticirana, sam postupak *neurofeedbacka* je vrlo jednostavan, bezbolan i neinvazivan. To je znanstveno dokazan način kojim se poboljšava način funkcioniranja mozga intenzivnim treningom mozga (16-18).

international cooperation, as well as to the detailed elaboration of the investment area and the definition of potential beneficiaries in the area of healthcare for the use of the European Structural and Investment Funds (ESI Funds), consultancy within partnerships, monitoring and evaluation of indicators, project stock preparation, information, and promotion (11).

For the last ten years, TMS has been used in the world and in western Europe in the treatment of mental and neurological diseases and in the rehabilitation of patients. Over the past ten years, a significant number of recent publications have been published in peer-reviewed journals that confirm the efficacy with minimal side effects of said therapy. Of course, the clinic and hospital services must be accessible to both inpatients and outpatients, both in diagnostic and therapeutic terms (15).

The neurofeedback trap method has proven to be useful in the treatment of people with mental disorders and therefore in the treatment of people with neurocognitive disorders. This is therapeutic method based on monitoring brain electrical activity (EEG) and giving feedback formation. Specifically, some disorders are related with specific patterns of brain activity. This method makes it possible to permanently change nor „bad“ patterns and simply teach the brain to work better and thus reduce or completely eliminate the symptoms of the disorders such as are: attention-deficit / hyperactive disorder (ADHD), mood disorder (depression); sleep disorder (insomnia, difficulty sleeping, frequent awakening), anxiety and various fears; stress and elimination of stress; bad concentration; learning difficulties, migraine headache. Although the technology is very sophisticated, the neurofeedback procedure itself is very simple-out, painless and non-invasive. It's scientific a proven way to improve the way we function brain zoning by intensive brain training (16-18).

REFERENTNI CENTRI KAO CENTRI IZVRSNOSTI

Kako bismo omogućili najbolje liječenje za osobe s neurokognitivnim poremećajima potrebno je osnovati referentne centre koji bi se povezali s drugim centrima izvrsnosti i u Europskoj uniji. Zdravstvene politike Europske unije teže unaprjeđenju suradnje među zemljama Europske unije, a to nadasve uključuje i njihovo umrežavanje. Neke mreže koriste javnozdravstvene i istraživačke programe Europske unije. Takva se suradnja obično temelji na bilateralnim sporazumima ili zajedničkim projektima u pojedinim područjima. Štoviše, zdravstveni pristup varira diljem Europske unije pa je stoga potrebno učinkovitije i koordinirano povezivanje sa svrhom dijeljenja resursa i stručnosti stvaranjem Europskih referentnih mreža. Ciljevi Europskih referentnih mreža najbolje se mogu postići na razini Europske unije, jer podrazumijevaju sveobuhvatni pristup bolesniku u smislu visoko specijalizirane, kvalitetne i sigurne skrbi, europsku suradnju visoko specijaliziranih zdravstvenih ustanova, udruživanje znanja, poboljšanje postavljanja dijagnoze i njege u medicinskim domenama (u kojima je stručnost nedovoljno sveobuhvatna ili ne postoji dovoljan broj pacijenata za pružanje visoko specijalizirane skrbi), maksimalnu brzinu i opseg širenja inovacija u medicinskoj znanosti i zdravstvenim tehnologijama. Europske referentne mreže ujedno su i centralne točke medicinske izobrazbe i istraživanja, informiranja i ocjenjivanja. Sudjelovanje pružatelja zdravstvenih usluga u europskim referentnim mrežama je dobrovoljno i zahtijeva prihvaćanje kriterija i pravila za ocjenjivanje i vrednovanje. Svrha nije nužno stvaranje novih centara skrbi već umrežavanje - povezivanje postojećih i/ili prepoznavanje postojeće mreže koja će raditi kao stalna platforma na razini EU (10).

Palijativnu skrb potrebno je razvijati prema integriranom modelu koji uključuje postojeće elemente sustava zdravstvene zaštite, uz prenamjenu postojećih smještajnih i terapij-

REFERENCE CENTER AS A CENTER OF EXCELLENCE

In order to provide the best treatment for people with neurocognitive disorders, it is necessary to set up Reference Centers to connect with other Centers of Excellence in the European Union. European Union health policies seek to promote co-operation between EU countries, and above all involve networking. Some networks use public health and European Union research programs. Such cooperation is usually based on bilateral agreements or joint projects in specific areas. Moreover, the health approach varies across the European Union and therefore a more effective and coordinated link is needed with the purpose of sharing resources and expertise through the creation of European reference networks. The objectives of the European Reference Networks can best be achieved at the level of the European Union, as they entail comprehensive access to the patient in terms of providing highly specialized, quality, and safe care, European cooperation of highly specialized healthcare institutions, pooling knowledge, improving diagnosis, and care in medical domains (in which expertise is insufficient comprehensive or insufficient number of patients to provide highly specialized care), maximum speed and scope of diffusion of innovation in medical science and health technologies. European reference networks are also central points of medical education and research, information and assessment. Participation health care providers in European reference networks are voluntary and required acceptance of evaluation criteria and rules and evaluation. The purpose is not necessarily to create new ones care centers already networking - connecting existing and / or identifying an existing network that will work as a permanent platform at EU level (10).

Palliative care should be developed according to an integrated model that incorporates the existing elements of the health care system, with the conversion of existing accommodation and

sko-rehabilitacijskih kapaciteta, osnaživanje i osposobljavanje profesionalaca, te postavljanje novih procedura i standarda rada. U pružanju palijativne skrbi važnu ulogu trebaju imati i partneri iz drugih sektora, uključujući i civilno društvo. No, na klinike i u bolnice trebalo bi primati palijativne pacijente samo u slučajevima pogoršanja stanja ili potrebe zahvata koji se ne može obaviti u kućnim uvjetima. Najveći dio palijativne skrbi treba i nadalje biti na razini primarne zdravstvene zaštite i domova zdravlja koji ugovaraju koordinatore palijativne zaštite i mobilne palijativne timove.

Važno je ovdje istaknuti da domovi zdravlja, registrirani za palijativnu djelatnost, od početka 2016. imaju mogućnost ugovaranja koordinatora za palijativnu skrb i mobilnih palijativnih timova utvrđenih prema broju stanovnika pojedinih županija. Tako je Grad Zagreb s obzirom na svoju veličinu dobio osam koordinatora. Cijeli plan zbrinjavanja palijativnih bolesnika osmišljen je na način da klinike i bolnice obavijeste koordinatore o otpuštanju palijativnih pacijenata nakon čega će koordinatori osiguravati zdravstvenu njegu u kući, socijalnog radnika, obavijestiti izabranog liječnika, patronažnu sestru i posudionicu pomagala te uskladiti sve službe na terenu uključene u skrb. Svrha svih tih aktivnosti je da se palijativnog pacijenta ne izolira u ustanovi i izolira iz obitelji, već da se osigura maksimalna podrška kako bi pacijent do kraja života mogao ostati u svom domu. Obiteljima bi na raspolaganju trebale biti i razne usluge socijalne skrbi, poput gerontodomaćica, gerontonjegovateljica i dnevnih boravaka za smještaj palijativnih pacijenata u razdoblju dok se obitelj za njih ne može brinuti. U Ministarstvu zdravstva Republike Hrvatske utvrdili su kadrovske normative i osigurali novčana sredstva za zdravstvenu zaštitu palijativnih bolesnika. Za ostalo je važna podrška lokalne zajednice i socijalne službe. Liječnici obiteljske medicine zaduženi su za rano prepoznavanje takvog stanja te upoznavanje pacijenta s njegovim pravima, npr. mogućnosti odbijanja određenih za-

therapeutic-rehabilitation capacities, the empowerment and training of professionals, and the setting of new procedures and standards of work. Partners from other sectors, including civil society, should also play an important role in providing palliative care. However, palliative patients should be admitted to Clinics and Hospitals only in cases of worsening conditions or if there is need for a non-residential intervention. The largest part of palliative care should continue to be at the level of primary health care and health centers contracting palliative care coordinators and mobile palliative teams. In order to improve the treatment of people with neurocognitive disorders, it is necessary to emphasize the importance of an interdisciplinary approach, that is, treatment in which physicians of other specialties are involved in addition to psychiatrists.

It is important to point out here that health centers registered for palliative care are from the beginning In 2016, they have the ability to contract palliative care coordinators and mobile palliative care providers teams determined by population of individual counties. So is the City of Zagreb with respect got eight coordinators to his size. Complete care plan for palliative patients it is designed to inform clinicians and hospitals of palliative care coordinators patients after which the coordinators will provide home health care, social worker, inform the chosen doctor, your sister and the utility bowl to match you all field services involved in care. Purpose all of these activities are to ensure that the palliative patient is not isolated in the institution and isolated from the family, but to provide maximum support in order the patient could remain in his for the rest of his life home. Families should be available various social welfare services, such as housewives, carers and day care provider tays for palliative patients in a period until the family can take care of them. Ministry of Health of the Republic of Croatia established staffing standards and secured

hvata. Palijativni bolesnik već sada kod svog liječnika može potpisati standardizirani obrazac kojim, s punom odgovornošću, odbija određene zahvate. Obrasci su dostupni na *web* stranici Ministarstva zdravstva Republike Hrvatske (4). Zahvaljujući napretku medicine imamo mogućnost da ljudi umiru bez boli i to je imperativ.

U cilju poboljšanja liječenja osoba s neurokognitivnim poremećajima potrebno je naglasiti važnost interdisciplinskog pristupa, odnosno liječenja u kojem uz psihijatre učestvuju i liječnici drugih specijalnosti.

ČOVJEK JE I DUHOVNO BIĆE

Psihijatrija se od davnih dana otvara prema području duhovnosti i to otvaranje nije slučajno. Naime, medicina je od svojih antičkih početaka sagledavala čovjeka kao jedinstvo duha i tijela, pa samim time i čovjekovo zdravlje, odnosno dobrobit kao jedinstvo dobrobiti duha i tijela. Veliki broj zdravstvenih studija potvrđuje pozitivnu spregu duhovnosti s bržim oporavkom od raznih bolesti te poboljšanjem kvalitete življenja kroničnih i terminalnih bolesnika. U sve većem broju zemalja duhovnost nalazi svoje mjesto i u izravnoj kliničkoj primjeni, a vodeći svjetski medicinski fakulteti održavaju trajnu edukaciju o pozitivnom učinku duhovnosti na ljudsko zdravlje kolegijem iz duhovnosti. Vjernici neovisno o vjeroispovijesti potvrđuju da im vjera daje mir koji dovodi do psihofizičke relaksacije (19).

Bolesnicima i njihovim obiteljima na mrežnim stranicama zdravstvenih institucija moraju biti dostupne sve informacije na temelju kojih mogu odlučiti o odabiru ustanove i metoda liječenja. Jedino tako osiguravamo i uključujemo bolesnika i njegovu obitelj kao aktivne partnere u liječenju. Uključenost pacijenta u procesu planiranja liječenja, izbora alternativa lijekova i odluke o prijelazu drugim razinama skrbi treba biti maksimalna u cilju poboljšanja uzimanja lijekova i pridržavanja plana liječenja. S obrazovanim i opunomoćenim bolesnikom moguće je

them financial support for palliative patients health care. For the rest, support is important local communities and social services. Doctors of family medicine is responsible for early recognition of this condition and for informing the patient of his or her rights, eg the possibility of refusing certain procedures. Palliative patient already now he can sign a standardized form with his doctor, with full responsibility, rejects certain interventions. Forms are available on the website of the Ministry of Health of the Republic of Croatia (4). Thanks to the advancement of medicine, we have the ability to make people die without pain and it is imperative.

In order to improve the treatment of people with neurocognitive disorders, emphasis should be given the importance of an interdisciplinary approach, respectively treatment in which psychiatrists and other specialties.

THE HUMAN IS ALSO A SPIRITUAL BEING

Psychiatry has been opening to the realm of spirituality since ancient times, and this is no accident. A large number of health studies confirm a positive connection of spirituality with a faster recovery from various diseases and an improvement in the quality of life of chronic and terminal patients. In a growing number of countries, spirituality is also in direct clinical application, with world leading medical colleges providing ongoing education on the positive impact of spirituality on human health through a course in spirituality. Believers, regardless of religion, affirm that faith gives them peace that leads to psychophysical relaxation (19).

Patients and their families must have access to information on the health institution's website on the basis of which they can decide on the choice of institution and treatment method. This is the only way to secure and involve the

uvesti prilagođene hitne planove i samoprocjenu za bolju kontrolu bolesti (2).

Važan dio svake bolnice i klinike je i njen okoliš. Oblikovanje prostora je važan korak u stvaranju ugodnog, terapijskog okružja u kojem se bolesnici osjećaju ugodno i opušteno, u kojem se smanjuje napetost i stres, te se poboljšava njihovo raspoloženje. Pri oblikovanju prostora treba uzeti u obzir usklađivanje oblika i njihove visine u kompoziciji prostora, komponiranje boja biljnih vrsta u skladu s njegovim vremenom cvatnje, oblikovanje različitih perspektiva s obzirom na točku promatranja pojedinih dijelova vrta, te osiguravanje logične komunikacije u svim dijelovima prostora (20).

Već je poznato kako kućni ljubimci, posebno psi i mačke, donose mnoge dobrobiti za mentalno zdravlje svojih vlasnika. Zbog toga se ove životinje koriste u liječenju oboljelih od PTSP-a ili anksioznosti. Kućni ljubimci svakog se dana sve više vrednuju, a osim toga što su nam društvo i uveseljavaju nas, njihova prisutnost ima pozitivan utjecaj na zdravlje budući da povećava osjećaj sigurnosti i zaštite, a interakcija s kućnim ljubimcem izaziva lučenje oksitocina. Pozitivne osobine ljubimca poput odanosti, nježnosti, razdraganosti prenose se na ljude razvijajući kod njih socijalne vještine koje se opažaju kod bolje interakcije i suživota s drugim ljudima. Utjecaj životinja na ljude je pozitivan jer ih potiče na interakciju, na preuzimanje odgovornosti za sebe i druge i jača vrijednosti poput solidarnosti i poštovanja (21). No, prednosti nisu samo emocionalnog tipa. Posjedovanje ljubimca može pomoći i u prevenciji kardiovaskularnih i drugih bolesti, jer time što ih izvodimo u šetnju, ujedno vježbamo i boravimo na svježem zraku (21).

Utjecaj životinja na ljude je toliko pozitivan da su čak i mnogi zdravstveni programi krenuli uključivati ljubimce u okviru terapije. Osim pasa vodiča postoje psi koji su obučeni da pomažu oboljelima od dijabetesa ili jednostavno prave društvo bolesnim i starijim osobama (21).

patient and their carer as active partners in treatment. Patient involvement in the treatment planning process, choice of drug alternatives, and decision regarding transition to other levels of care should be maximized in order to improve medication uptake and adherence to the treatment plan. With an educated and empowered patient, customized emergency plans and self-assessment can be introduced to better control the disease (2).

A vital part of every hospital and clinic is its environment. Designing a space is an important step in creating a comfortable, therapeutic environment in which patients feel comfortable and relaxed, in which tension and stress are reduced and their mood is improved. (20).

It is already known that pets, especially dogs and cats, bring many mental health benefits to their owners. Therefore, these animals are used in the treatment of patients with PTSD or anxiety. Pets are becoming more and more valuable every day, and in addition to keeping us company and entertaining us, their presence has a positive effect on health as it increases the sense of safety and protection, and interaction with pets causes oxytocin to secrete. Positive characteristics of pets, such as loyalty, tenderness, and cheerfulness, are passed on to people, thus developing in them those social skills which are observed in better interaction and co-existence with other people. The impact of animals on humans is positive because it encourages them to interact, take responsibility for themselves and others, and strengthen values such as solidarity and respect (21). But the benefits are not just of the emotional type. Having a pet can also help prevent cardiovascular and other diseases because by taking them for a walk we also exercise and stay out in the fresh air. (21).

The impact of animals on humans is so positive that even many health programs have started include pets within therapy. Except guide dogs, there are dogs that are trained to help diabetics or simply make society sick and elderly (21).

Poznato je da se porastom temperature i vlage iznad granice normale smanjuje radni učinak zaposlenika. Oni postaju umorni i neraspoloženi što se odražava na njihovu radnu učinkovitost, a utjecaj ovih negativnih čimbenika utječe i na osobe koje se liječe zbog neurokognitivnih poremećaja (22).

Increasing the temperature and humidity above the normal limit is known to reduce employee performance. They become tired and unwell, which reflects on their work efficiency, and the impact of these negative factors also affects people being treated for neurocognitive disorders (22).

ZAKLJUČAK

Daljnji razvoj klinika i bolnica u kojima se liječe osobe s neurokognitivnim poremećajima trebao bi se razvijati u kontekstu cjelokupnog razvoja zdravstvene zaštite osoba s duševnim smetnjama koji se temelji na deinstitucionalizaciji, jačanju zaštite mentalnog zdravlja u zajednici, ali i osuvremenjivanju potrebnih bolničkih kapaciteta i razvoju referentnih centara kao centara izvrsnosti (23).

CONCLUSION

Further development of clinics and hospitals that treat people with neurocognitive disorders should develop in the context of the overall development of health care for people with mental disabilities which is based on deinstitutionalization, strengthening of mental health care in the community, and updating the necessary hospital capacity and the development of reference centres as centres of excellence (23).

LITERATURA/*REFERENCES*

1. Mimica N, Dajčić M, Ivanković V, Pecotić Z, Šimić G, Kaćanski Vidas A, Presečki P. Alzheimer Disease Societies Croatia. 22nd Conference of Alzheimer's Disease International. Berlin, Germany, October 12-14, 2006. Abstracts, pp 102-3.
2. Presečki P, Kušan Jukić M, Martić Biočina S, Mimica N, Agius M. Social support in the community and the feeling of hopelessness in psychiatric patients. Psychiatr Danub 2007; 19(Suppl 1): 32-3.
3. Vuksan-Ćusa B, Jakovljević M, Mimica N, Šagud M, Sartorius N. Algorithms for pharmacotherapy of dementia. Psychiatr Danub 2007; 19(4): 382-3.
4. Ministarstvo zdravstva. Nacionalna strategija razvoja zdravstva 2012. - 2020., dostupno na: www.zdravstvo.hr
5. Domac V, Mrkoci B, Pecotić Z. Odjel za psihogerijatriju Psihijatrijske bolnice Vrapče 1969 - 1983. Zbornik radova VII. kongresa psihijatara Jugoslavije, Budva, 3. – 6. oktobar 1984.
6. Pecotić Z, Štengl-Martinjak M. Psihijatrijska bolnica Vrapče – Zagreb: Odjel za psihogerijatriju. U: Mimica N, Jukić V (ur.) Knjiga postera stručnjaka Psihijatrijske bolnice Vrapče 1978. – 2006. Zagreb: Psihijatrijska bolnica Vrapče; 2006, str. 158-9.
7. Radbruch L, Payne S. White Paper on standards and norms for hospice and palliative care in Europe: part 1. Recommendations from the European Association for Palliative Care. Eur J Palliat Care 2009; 16(6): 278-89.
8. Jušić A, Oliver D. Establishing palliative care in Croatia: memories of a pioneer, Eur J Palliat Care 2016; 23(4).
9. Hrvatski zavod za javno zdravstvo. Hrvatski zdravstveno-statistički ljetopis za 2015. godinu, dostupno na www.hzjz.hr
10. Europska komisija. Vodič za sredstva EU-a.2017. https://zdravlje.gov.hr/dokumenti/10
11. Carritt T, Ion C, Mooz P, Baptista K, Dumont F, Radermacher V *et al*. Vodič kroz sredstva EU-a za početnike - Pregled mogućnosti financiranja sredstvima EU-a u razdoblju 2014. – 2020.
12. Dajčić M, Dajčić T, Mimica N, Šimić G. Hrvatska udruga za Alzheimerovu bolest. Neurol Croat 2012; 61(Suppl 4): 137-8.
13. Daiber A, Lelieveld J, Steven S, Oelze M, Kröller-Schön S, Sørensen M. The "exposome" concept - how environmental risk factors influence cardiovascular health. Acta Biochim Pol 2019. doi: 10.18388/abp.2019_2853.
14. Mimica N. Alzheimerova bolest – pošast 21. stoljeća!. Diabetes/slatki život 2008; 16(4): 24-5.
15. Keizer AW. Standardization and Personalized Medicine Using Quantitative EEG in Clinical Settings. Clin EEG Neurosci 2019. doi: 10.1177/1550059419874945.
16. Naas A, Rodrigues J, Knirsch JP, Sonderegger A. Neurofeedback training with a low-priced EEG device leads to faster alpha enhancement but shows no effect on cognitive performance: A single-blind, sham-feedback study. PLoS One 2019; 14(9): e0211668. doi: 10.1371/journal.pone.0211668. eCollection 2019.
17. Zhang Q, Wang H, Luo C, Zhang J, Jin Z, Li L. The neural basis of semantic cognition in Mandarin Chinese: A combined fMRI and TMS study. Hum Brain Mapp 2019. doi: 10.1002/hbm.24781.
18. Wong HC, Zaman R. Neurostimulation in treating ADHD. Psychiatr Danub 2019; 31(Suppl 3): 265-75.

19. Ljubičić Đ, Grbac J. Duhovnost i psihijatrija: Što koristi čovjeku ako zadobije čitav svijet, a izgubi dušu. Riječki teološki časopis 2009; 33: 45.
20. Manera V, Abrahams S, Agüera-Ortiz L, Bremond F, David R, Fairchild K et al. Recommendations for the nonpharmacological treatment of apathy in brain disorders. Am J Geriatr Psychiatry 2019. doi: 10.1016/j.jagp.2019.07.01
21. McLaughlin K, Hamilton AL. Exploring the influence of service dogs on participation in daily occupations by veterans with PTSD: A pilot study. Aust Occup Ther J 2019. doi: 10.1111/1440-1630.12606.
22. Hetzel-Riggin MD, Swords BA, Tuang HL, Deck JM, Spurgeon NS. Work engagement and resiliency impact the relationship between nursing stress and burnout. Psychol Rep 2019. doi: 10.1177/0033294119876076.
23. Mimica N, Kušan Jukić M, Presečki P, Ivičić M, Braš M, Vrbić Lj et al. Hrvatska strategija borbe protiv Alzheimerove bolesti i drugih demencija - prijedlog nacrta uz nadopune. Medix 2015; 21(117): 111-8.

Muče li starije ljude njihovi seksualni problemi?

/ Do Older People Suffer When They Have Sexual Problems?

Goran Arbanas

Klinika za psihijatriju Vrapče, Zagreb i Medicinski fakultet u Rijeci, Rijeka, Hrvatska
/ University Psychiatric Hospital Vrapče, Zagreb & Rijeka Medical School, Rijeka, Croatia

Seksualni problemi imaju veću učestalost u starijoj životnoj dobi, ali nose manju patnju nego u mlađoj dobi. Cilj ovog rada jest utvrditi učestalost i vrstu seksualnih problema kod osoba koje su se javile u Ambulantu za seksualnu smetnje. Pretraženi su podatci Ambulante za seksualne smetnje Klinike za psihijatriju Vrapče, koja djeluje od 2014. godine. Kroz tu ambulantu prošlo je 589 pacijenata, od čega je 6,8 % bilo starije od 65 godina (40 pacijenata). Među njima bila je samo jedna žena. Većina pacijenata (57 %) imala je erektilnu disfunkciju, dok su ostali seksualni poremećaji bili rijetki. Ni jedan pacijent nije se javio zbog rodne disforije, ni zbog parafilija. Većina pacijenata s erektilnom disfunkcijom imala je organsku podlogu ovog problema. Muškarci starije životne dobi smatraju da im je erektilna disfunkcija izvor patnje te se javljaju na liječenje u ambulantu za seksualne smetnje. Potrebno je posebno obratiti pažnju na organske uzroke erektilne disfunkcije. Dio pacijenata koji se javlja zbog seksualnih smetnji zapravo imaju drugu patologiju (npr. organski sumanuti poremećaj).

/ Sexual problems have a higher prevalence in old age but are considered less distressing than in younger people. The aim of this study is to determine the prevalence and the type of sexual problems in people who contacted the outpatient clinic for sexual problems. Data from the outpatient clinic for sexual problems of the University Psychiatric Hospital Vrapče, founded in 2014, were analysed. 589 patients were examined in the outpatient clinic for sexual problems, and among them there were 6.8% of those aged 65 and above. There was only one woman. The majority of the patients (57%) were diagnosed with erectile dysfunction, while other sexual problems were rare. None of the patients suffered from gender dysphoria or paraphilias. The majority of the patients with erectile dysfunction had a physical factor influencing the problem. Men aged 65 and above consider erectile dysfunction distressful and seek treatment in outpatient clinic for sexual problems. It is important to pay special attention to physical factors influencing erectile dysfunction in this group. A small subgroup of patients think they have sexual problems but actually have other psychological problems (e.g. organic delusional disorder).

ADRESA ZA DOPISIVANJE / *ADDRESS FOR CORRESPONDENCE*:
Doc. dr. sc. Goran Arbanas, dr. med.
Klinika za psihijatriju Vrapče
Bolnička cesta 32
HR-10090 Zagreb, Hrvatska
E-pošta: goran.arbanas@bolnica-vrapce.hr

KLJUČNE RIJEČI / *KEY WORDS*:
Seksualne disfunkcije / *Sexual Dysfunction*
Starija dob / *Older Age*
Erektilna disfunkcija / *Erectile Dysfunction*

TO LINK TO THIS ARTICLE: https://doi.org/10.24869/spsih.2019.373

UVOD

Seksualni problemi učestali su problemi kod muškaraca i žena; većina istraživanja ukazuje da gotovo svaka treća žena i svaki četvrti muškarac tijekom života razvije barem jedan seksualni problem (1-3). No, da bi se postavila dijagnoza seksualne disfunkcije, potrebno je da ovaj seksualni problem osobi stvara patnju (4). Otprilike polovica ljudi sa seksualnim problemima navodi da im je seksualni problem izvor patnje (4).

Učestalost seksualnih problema raste s dobi. Samo rijetki seksualni problemi češći su u mlađoj dobi, npr. vaginizam kod žena ili prijevremena ejakulacija kod muškaraca (taj je problem podjednako čest u svim dobnim skupinama) (5). S dobi se smanjuje udio onih koji seksualni problem doživljavaju kao onesposobljavajući ili kao izvor patnje (4).

Brojni su razlozi povećane učestalosti seksualnih problema u starijoj životnoj dobi: povećana učestalost različitih tjelesnih bolesti koje dovode do seksualnih problema (npr. šećerna bolest, hipertenzija, arterioskleroza), povećana učestalost određenih duševnih bolesti (npr. depresija), gubitak partnera. Fiziološka zbivanja u starosti (npr. promjena sastava vezivnog tkiva, promjena učestalosti i međusobnog odnosa različitih neurotransmiterskih receptora) dovodi do fizioloških promjena u seksualnom funkcioniranju (npr. smanjena čvrstoća erekcije, duže vrijeme do ejakulacije, otežano vlaženje i slično) koji se još ne smatraju seksualnim disfunkcijama (6).

Seksualne poremećaje u širem smislu dijelimo u tri skupine: seksualne disfunkcije, rodna disforija i parafilije (obje suvremene klasifikacije, tj. MKB i DSM, prihvatile su ovakvu podjelu) (4,7). Seksualne disfunkcije su daleko češće od drugih dviju kategorija i najveći broj ljudi koji se javlja na liječenje zbog seksualnih problema dolazi upravo zbog seksualnih disfunkcija (8,9).

U Hrvatskoj od 2016. godine djeluje Ambulanta za seksualne smetnje (10). Većina ljudi koji

INTRODUCTION

Sexual problems are prevalent both in men and women; studies show that almost one third of women and one fourth of men have at least one sexual problem during their lifetime (1-3). However, one of the criteria for the diagnosis of a sexual dysfunction is for this sexual problem to cause distress (4). Approximately one half of the people with sexual problems claim that their sexual problem causes them distress (4).

The prevalence of sexual problems is higher in older age. Only a few of all sexual problems are more prevalent in younger age: e.g. vaginismus in women and premature ejaculation in men (it is of the same prevalence in all the age groups) (5). With the increase in age, there is less and less of those who consider their sexual problem to be debilitating or a source of distress (4).

There are many reasons why sexual problems are more prevalent in older age: higher prevalence of different physical conditions that can lead to sexual problems (e.g. diabetes mellitus, hypertension, arteriosclerosis), higher prevalence of certain mental disorders (e.g. depression), and loss of a partner. Physiological changes related to age (e.g. change of the content of connective tissue, the change in the amount and the ratios of different neurotransmitter receptors) lead to physiological changes in sexual functioning (e.g. erections being less rigid, longer time to ejaculation, difficulties in lubrication, etc.) that are still not considered sexual dysfunctions (6).

Sexual disorders in a broader sense are divided into three groups: sexual dysfunctions, gender dysphoria, and paraphilias (both of the current classifications, i.e. ICD and DSM, accepted this kind of division) (4,7). Sexual dysfunctions are much more prevalent than the other two categories and the majority of people who contact a sexual therapist due to sexual problems do that for sexual dysfunctions (8,9).

In Croatia, the first outpatient clinic for sexual problems was established in 2016 (10). The majority of people who have a sexual problem

imaju neki seksualnu problem javlja se upravo u ovu ambulantu, a puno rjeđe pojedinim specijalistima psihijatrima ili urolozima u njihove specijalističke ambulante (11).

CILJ RADA

Cilj ovog rada jest utvrditi koliko se često i s kojim problemima javljaju stariji ljudi (stariji od 65 godina) u Ambulantu za seksualne smetnje zbog svojih seksualnih problema.

METODE

Pretraženi su podatci iz Ambulante za seksualne smetnje Klinike za psihijatriju Vrapče, te su obrađeni demografski podatci i podatci o razlogu dolaska, te psihički status, anamnestički podatci i podatci o komorbiditetu kod osoba koje su se javile u ovu ambulantu.

Ambulanta za seksualne smetnje započela je s radom u lipnju 2014. godine (tada u Općoj bolnici Karlovac), a od 1. listopada 2015. godine djeluje u Klinici za psihijatriju Vrapče (10). Kroz ambulantu je do 1. listopada 2019. godine prošlo 589 pacijenata.

REZULTATI

Kroz ambulantu za seksualne smetnje tijekom pet i pol godina njezina postojanja liječeno je 589 pacijenata od kojih 19 % (112) žena. Od tih 589 pacijenata 40 je bilo u dobi 65 i više godina, što čini 6,8 % od ukupnog broja pacijenata. Od ovih 40 pacijenata samo je jedna žena, što je značajno manje nego u ukupnom uzorku (χ^2 = 6,93; p = 0,008).

Ispitanici (stariji od 65 godina) bili su prosječne dobi 70,4 godine, a raspon godina bio je od 65 do 88 (slika 1).

Postavljene dijagnoze prikazane su na slici 2. Najveći broj pacijenata (28 od 49) došao je zbog

have come to this centre, and less often they contacted other specialists of psychiatry or urology in their specialist clinics (11).

AIM

The aim of this study was to establish how often elderly people (aged 65 and above) come to the outpatient clinic for sexual problems and for what reasons.

METHODS

Data from the outpatient clinic for sexual problems of the University Psychiatric Hospital Vrapče were analysed and demographic data and data on the reasons for contact, mental state, medical history data, and comorbidity data of the patients of this clinic were researched.

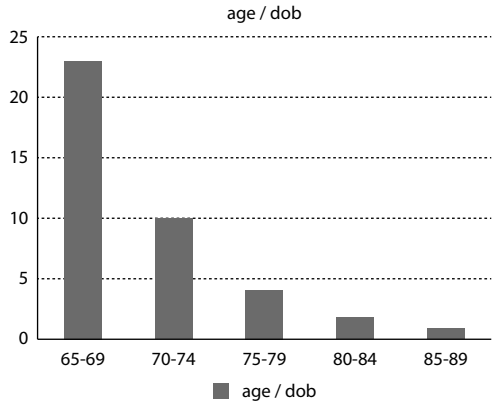
The outpatient clinic for sexual problems was founded in June 2014 (at that time in the Karlovac General Hospital) and moved on the first of October 2015 to the University Psychiatric Hospital Vrapče (10). By the first of October 2019, 589 patients contacted this outpatient clinic.

RESULTS

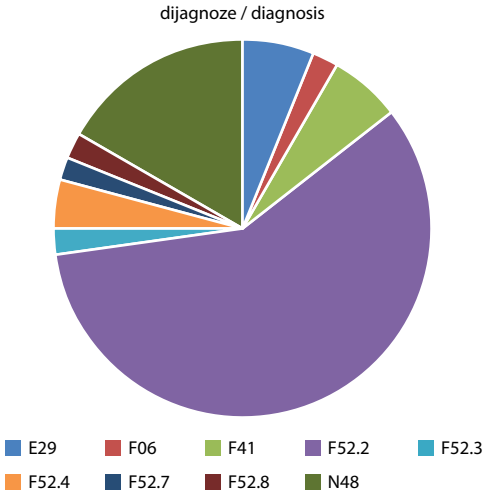
During the five and a half years of the clinic's existence, 589 patients were treated in the outpatient clinic for sexual problems, and among them 19% (112) were women. Among the 589 patients, 40 were aged 65 or above, which is 6.8% of the total number. Only one woman was among these 40 patients, and this is statistically less than in the total sample (χ^2 = 6.93; p = 0.008).

Subjects (older than 65) were of the average age of 70.4 and the age range was between 65 and 88 (Figure 1.).

The distribution of diagnoses reached during the diagnostic process is shown in Figure 2. The largest number of patients (28 of 49) came



SLIKA 1. Raspodjela broja pacijenata prema dobi
FIGURE 1. Distribution of number of patients of different age groups



SLIKA 2. Dijagnoze kod osoba starijih od 65 godina
FIGURE 2. Diagnoses in patients aged 65 and above

problema erektilne disfunkcije. Gledajući samo seksualne probleme, dvojica su došla zbog prijevremene ejakulacije, te po jedan zbog odgođene ejakulacije, pretjeranog seksualnog nagona i nespecifične seksualne smetnje. Kod jednog bolesnika nije utvrđen seksualni problem, već mu je postavljena dijagnoza organskog sumanutog poremećaja. Ni jedan pacijent nije se javio zbog rodne disforije, ni zbog parafilije. Jedina žena u uzorku došla je zbog problema s doživljavanjem orgazma.

Među bolesnicima s erektilnom disfunkcijom kod osam se radilo o direktnoj posljedici bolesti (i operacije) prostate, a kod tri se radilo o hipogonadizmu. Kod svih osim kod trojice utvrđen je dodatni organski čimbenik koji je bio ili etiološki ili je pridonosio erektilnoj disfunkciji (npr. kardiovaskularne bolesti, bolesti mokraćnog mjehura). Svi osim četiri bolesnika uzimali su različite lijekove (od kojih mnogi mogu imati seksualne nuspojave).

RASPRAVA

U Ambulantu za seksualne smetnje Klinike za psihijatriju Vrapče mnogo se češće javljaju muškarci nego žene, što je u skladu s drugim sličnim ambulantama u Europi i svijetu (8,9,12). Žene čine manje od 20 % pacijentica u ovoj ambulanti. Međutim, udio žena među starijom

due to erectile dysfunction. If we consider only sexual problems, two came due to premature ejaculation and one due to retarded ejaculation, one for hypersexual disorder, and one for a nonspecific sexual problem. In one of the patients no sexual problems were diagnosed but was diagnosed for organic delusional disorder. None of the patients had gender dysphoria nor paraphilia. The only woman in the sample was diagnosed with orgasm problems.

Among the patients with erectile dysfunction, in eight the dysfunction was a direct consequence of a prostate disease (or surgery), and in three the cause was hypogonadism. In all the patients but three, at least one organic factor was established that was either the etiological or an additional factor for the erectile dysfunction (e.g. cardiovascular diseases, diseases of the vesicle). All but four of the patients had been taking different medications (many of which can have sexual side effects).

DISCUSSION

More men come to the outpatient clinic for sexual problems of the University Psychiatric Hospital Vrapče than women, and this is expected as the same applies for the majority of sexology

populacijom je daleko manji, te se u pet godina javila samo jedna žena (s problemima u doživljavanju orgazma). Ovo je u skladu s činjenicom da u starijoj životnoj dobi, premda velik broj ljudi i nadalje smatra da je seksualnost bitna komponenta njihova života, to više vrijedi za muškarce, nego za žene (13). No, činjenica da se u ambulantu javila samo jedna žena ne može se objasniti isključivo ovim razlogom, te smatramo da ulogu imaju i sociokulturalni čimbenici, tj. dvostruki kriteriji koji vrijede za muškarce i žene, tj. spolni stereotipi. Jedan od socijalnih stereotipa je da je muškarac taj koji treba biti seksualno aktivan, inicijator seksualnih aktivnosti i koji bi trebao duže vrijeme održavati seksualnu aktivnost i želju (14). U skladu s time veća je šansa da će se među osobama iste razine patnje češće na liječenje javiti muškarci, jer seksualni problem više pogađa stereotipnu mušku rodnu ulogu, a manje žensku. Postavlja se pitanje ne pate li zaista žene starije životne dobi zbog postojećih seksualnih problema ili unatoč patnji ne traže liječenje, jer bi u ovom drugom slučaju trebalo reagirati na drugačiji način (tj. različitim mjerama umanjiti sram i potaknuti ih na traženje pomoći).

Dobna distribucija pacijenata pokazuje jasan pad, tj. da je u kategoriji starijih (tj. >65 godina) puno više onih u dobnoj skupini do 75 godina, nego onih u višim dobnim skupinama. Razlozi su vjerojatno sve manji broj ljudi u svakoj sljedećoj dobnoj skupini, ali i sve manja patnja zbog seksualnih problema u višim dobnim skupinama (jednim dijelom jer se to smatra dijelom normalnog starenja, a drugim dijelom vjerojatno i zbog toga što se s dobi povećava udio onih koji više nemaju partnera/icu).

Što se tiče razloga za dolazak na liječenje u Ambulantu za seksualne smetnje, na prvom je mjestu erektilna disfunkcija, što je i očekivano (1,2). Učestalost erektilne disfunkcije jasno raste s dobi, te u visokoj dobi (iznad 70 godina) preko 50 % muškaraca ima erektilnu disfunkciju (15). Također, erektilna disfunkcija više po-

units in Europe and worldwide (8,9,12). Women make up less than 20% of patients in the clinic. However, the proportion of women among the population of the elderly is even lower, and during the period of five years only one woman (with orgasm problems) came to the clinic. This is in line with the fact that in older age, although many people consider sexuality to be the important aspect of their life, more men than women confirm the importance of sexuality (13). However, the fact that only one woman came to the clinic cannot be explained by this reason alone. We assume that there is a role of sociocultural factors, i.e. double criteria for men and women or sexual stereotypes. One social stereotype says that men should be sexually active, the initiators of sexual encounters and the ones who should keep sexual activity and sexual desire into the old age (14). In line with this, there is a greater chance that among the people with the same level of distress, more men will seek treatment than women because sexual problems interfere with the stereotypical male sexual role and less with the stereotypical female gender (and sexual) role. We do not know if elderly women really do not suffer due to their sexual problems or if they, despite their suffering, do not seek treatment. If the latter is the case, then we should (using different measures) try to diminish the shame and encourage them to seek help.

Age distribution shows a clear linear relationship, with more patients in the younger age range (among those age 65 and above), and less in the age group of 75 and above. The reasons are: fewer people who are aged 75 and above, less distress due to sexual problems in older groups (at least partly due to the fact that the decline in sexual functioning is a part of the normal aging, and partly due to the fact that with age there is a higher prevalence of those who do not have a partner).

The most prevalent diagnosis in the outpatient clinic for sexual problems in those aged 65 and above was, as expected, erectile dysfunction (1,2). The prevalence of erectile dysfunction

gađa osjećaj muževnosti i mušku rodnu ulogu od drugih seksualnih problema (14).

Kod pacijenata smo našli vrlo visoku učestalost tjelesnih bolesti (na prvome mjestu bolesti prostate, hipogonadizam, kardiovaskularne bolesti) koji mogu biti glavni uzrok ili pridonosni čimbenik erektilnoj disfunkciji. Kod samo tri pacijenta s erektilnom disfunkcijom nismo mogli naći nikakav organski čimbenik koji bi mogao pridonijeti ovom stanju.

Zanimljivo je ipak napomenuti da se jedan pacijent javio zbog pretjeranog seksualnog nagona, koji doživljava kao izvor patnje, jer više nije sposoban tjelesno pratiti svoju povećanu seksualnu želju, a i njegova partnerica je bila nezadovoljna njegovom pojačanom seksualnom željom.

Drugi zanimljiv podatak jest pacijent koji je došao u ambulantu za seksualne smetnje zbog problema koji je on smatrao da je seksualne prirode, a na koncu se utvrdilo da se radi o organskom sumanutom poremećaju. Kao i u mlađoj životnoj dobi, različite duševne bolesti mogu imati simptome ili sadržaje simptoma u području seksualnosti (npr. nerijetko osobe s opsesivno-kompulzivnim poremećajem imaju seksualnu tematiku opsesivnih sadržaja) (16).

ZAKLJUČAK

Kad se govori o zdravstvenoj zaštiti starijih osoba obično se ne pomišlja na njihove seksualne probleme, no ovaj rad ukazuje da muškarci starije životne dobi erektilnu disfunkciju smatraju dovoljno uznemirujućom da zbog nje traže pomoć. Veliko je značenje tjelesnih čimbenika (i lijekova) u etiologiji erektilne disfunkcije, posebice u ovoj dobi.

rises with age, and in older age (70 and above) more than 50% of men have erectile dysfunction (15). Also, erectile dysfunction affects the sense of masculinity and the male gender role much more than other sexual problems (14).

A high prevalence of physical diseases was determined among the patients, primarily prostate diseases, hypogonadism, cardiovascular diseases, which can be the main cause or the additional factor for erectile dysfunction. Only three patients with erectile dysfunction did not have any additional physical problems that could affect erectile function.

Interestingly, one patient came due to hypersexual disorder, which is a cause of distress as he is not able to physically follow his high sexual desire and his partner was dissatisfied with his high sexual desire.

The other interesting case was a case of a patient who came because of the problem he considered to be of a sexual nature, but he was diagnosed with organic delusional disorder. As in younger age, different mental dysfunctions can have sexual symptoms or the sexual content of symptoms (e.g. often people with obsessive-compulsive disorder have a sexual content of obsessive thoughts) (16).

CONCLUSION

When considering health care of elderly people, sexual problems are usually not in the focus of interest, but this paper shows that men aged 65 and above believe that their erectile dysfunction is disturbing enough to seek professional help. There is a major influence of physical factors (and medications) on the aetiology of erectile dysfunction in this age group.

LITERATURA/*REFERENCES*

1. Nicolosi A, Laumann EO, Glasser DB, Brock G, King R, Gingell C. Sexual activity, sexual disorders and associated help-seeking behaviour among mature adults in five Anglophone countries from the Global survey of sexual attitudes and behaviors (GSSAB). J Sex Marital Ther 2006;32:331-42. doi: 10.1080/00926230600666369
2. Štulhofer A, Bajić Ž. Prevalence of erectile and ejaculatory difficulties among men in Croatia. Croat Med J 2006;47:114-24.
3. Štulhofer A, Gregurović M, Galić I, Pikić A. Prevalence of female sexual difficulties in a metropolitan setting. Medicina 2005;42(41):300-9.
4. Dijagnostički i statistički priručnik za duševne poremećaje, peto izdanje, DSM-5, Jastrebarsko, Naklada Slap, 2014.
5. Kirana PS, Tripodi F, Reisman Y, Porst H. (ed.) The EFS and ESSM syllabus of clinical sexology. Amsterdam, Medix, 2013.
6. Arbanas G. Seksualnost u starijoj životnoj dobi.U: Bago I, Ostoić S, Teklić T (ur.) Ekstravagantna tijela, ekstravagantne godine, čitanka. Zagreb: Kontejner, biro suvremene umjetničke prakse, 2013, str. 364-379.
7. https://icd.who.int/en/
8. Parish S, Dean J, Dabees K, Rubio-Aurioles E, Tiefer N. Ethical, socio-cultural and educational aspects of sexual medicine. U: Montorsi F, Basson R, Adaikan G, Becher E, Clayton A, Giuliano F i sur. Sexual medicine sexual dysfunctions in men and women. Paris: 3rd International Consultation on Sexual Medicine, 2010.
9. Fugl-Meyer KS, Giami A. Swedish clinical sexologists. Who are they? Who do they treat? Sexologies 2006;15:14-21.
10. Cazin K, Rožman J. Otvorenje prve ambulante za liječenje seksualnih poremećaja u Hrvatskoj – Opća bolnica Karlovac. Sestrinski glasnik 2015;20(1):75-6.
11. Arbanas G. Tko liječi seksualni problem u hrvatskom zdravstvenom sustavu? Soc psihijat 2019;47:102-12.
12. Alarcao V, Beato A, Almeida J, Machado FL, Giami A. Sexology in Portugal: narratives by Portuguese sexologists. J Sex Res 2015;18:1-14. 409:10.1080/00224499.2015.1104286.
13. Laumann EO, Paik A, Glasser DB, Kang JH, Wang T, Levinson B. A cross-national study of subjective sexual well-being among older women and men: findings from the global study of sexual attitudes and behaviors. Arch Sex Behav 2006;35:145-61.
14. Hall KSK, Graham CY. The cultural context of sexual pleasure and problems: psychotherapy with diverse clients. Routledge: New York, 2013.
15. Hyde Z, Flicker L, Hankey GJ, Almeida OP, McCaul KA, Chubb SA i sur. Prevalence and predictors of sexual problems in men aged 75-95 years: a population-based study. J Sex Med 2012;9(2):442-53. Doi: 10.1111/j.1743-6109.2011.02565.x
16. Aksoy UM, Aksoy SG, Maner F, Gokalp P, Yanik M. Sexual dysfunction in obsessive compulsive disorder and panic disorder. Psychiatr Danub 2012;24(4):381-5.

Uzroci i dinamika tjelesnih komplikacija/neželjenih događaja tijekom hospitalizacije bolesnika s demencijom

/ The Frequency and Causes of Physical Complications/ Adverse Events During the Hospitalization of Patients with Dementia

Mirna Sisek-Šprem[1], Nikola Žaja[1], Dubravka Kalinić[1,2], Mira Štengl-Martinjak[1], Zrinka Petrović[1], Katarina Brzak[1] Ninoslav Mimica[1,2]

[1]Klinika za psihijatriju Vrapče, Referentni centar Ministarstva zdravstva Republike Hrvatske za Alzheimerovu bolest i psihijatriju starije životne dobi, Zagreb, [2]Sveučilište u Zagrebu, Medicinski fakultet, Zagreb, Hrvatska

/ [1]*University Psychiatric Hospital Vrapče, Reference Centre of Ministry of Health of the Republic of Croatia for Alzheimer's Disease and Old Age Psychiatry, Zagreb,* [2]*University of Zagreb, School of Medicine, Zagreb, Croatia*

Uvod: Osobe s demencijom osjetljivije su na razvoj različitih komplikacija/neželjenih događaja u odnosu na osobe iste dobne skupine bez demencije. Češće se zaprimaju u bolnicu, gdje imaju veću prevalenciju komplikacija i povećanu smrtnost. *Cilj:* ispitati učestalost hitnih premještaja bolesnika s demencijom zbog tjelesnih komplikacija iz Klinike za psihijatriju Vrapče na somatske odjele drugih bolnica. *Metode:* U ovom retrospektivnom istraživanju analizirali smo podatke bolesnika s demencijom koji su liječeni od 1. siječnja do 31. kolovoza 2019. godine na Odjelu psihogerijatrije u Klinici za psihijatriju Vrapče s naglaskom na vrijeme trajanja hospitalizacije i razloge otpusta koji su doveli do premještaja s Odjela. *Rezultati:* Od siječnja do kraja kolovoza 2019. godine na Odjel psihogerijatrije u Klinici zaprimljeno je ukupno 256 bolesnika (67,97 % žena i 32,03 % muškaraca). Prosječna dob žena bila je 80,5, a muškaraca 76,4 godina. Premješteno na somatski odjel (bolnicu) bilo je 28 % bolesnika (40,24 % muškaraca, 23 % žena), a od toga 39 % u prvih sedam dana od dolaska u bolnicu. Pneumonija je bila vodeća somatska dijagnoza kod 19 % premještenih. Prosječno trajanje hospitalizacije među svim ispitanicima bilo je kod muškaraca 33,08 dana, a kod žena 36,47 dana. U istom je razdoblju na Odjelu preminulo 10,93 % bolesnika (12,2 % muškaraca i 10,34 % žena), od toga 25 % unutar pet dana od dolaska u bolnicu. Zbog neujednačenosti pisanja redoslijeda otpusnih dijagnoza, za detaljniju analizu razloga premještaja, bit će potrebno podrobnije ispitivanje. *Zaključak:* Najteža tjelesna pogoršanja i smrtni ishodi javljali su se u prvih tjedan dana od dolaska u bolnicu. Rezultati ukazuju na nužnost somatske obrade i liječenja bolesnika s demencijom prije nego budu hospitalizirani na psihijatrijskom odjelu.

*/ Introduction: Patients with dementia are more susceptible to the development of various complications/adverse events than people of the same age group without dementia. They are more often admitted to hospitals, where they have a higher prevalence of complications and higher mortality. Aim: To examine the frequency of physical complications that require emergency transfers of patients with dementia from the psychogeriatric ward of the University Psychiatric Hospital Vrapče (UPHV) to somatic wards of other hospitals. Patient**s** and methods: In this retrospective study we analysed the data of patients with dementia who received medical treatment at the psychogeriatric ward of the University Psychiatric Hospital Vrapče between 1 January and 31 August 2019, with special emphasis on the treatment length and reasons for discharge due to compromised medical condition. Results: 256 patients (67.97% female, 32.03% male) were admitted to the psychogeriatric ward of the UPHV. The average age was 80.5 years for female and 76.4 years for male patients. 28% of patients (23% of all female and 40.24% of all male patients) were transferred to somatic wards of other hospitals. 39% of all transferred patients were transferred within the first seven days after the admission to the UPHV. Pneumonia was*

the main somatic diagnosis among 19% of all transferred patients. The mean duration of hospitalization was 36.47 days for female patients and 33.08 days for male patients. 10.93% of all admitted patients (10.34% of all female and 12.2% of all male patients) died at the psychogeriatric ward, 25% of whom died within the first five days after the admission to the UPHV. Due to a lack of uniform order of registering diagnoses, a more detailed examination of reasons for transfers will be required. Conclusion: The most severe deteriorations in the physical condition and fatal outcomes occurred within the first week after the admission to the UPHV. The results indicate the necessity of somatic treatment of dementia patients before admission to a psychiatric ward.

ADRESA ZA DOPISIVANJE / *CORRESPONDENCE*:
Dr. sc. Mirna Sisek-Šprem, dr. med.
Klinika za psihijatriju Vrapče
Bolnička cesta 32
HR-10090 Zagreb, Hrvatska
E-pošta: mirna.sisek-sprem@bolnica-vrapce.hr

KLJUČNE RIJEČI / *KEY WORDS*:
Demencija / *Dementia*
Komorbiditet / *Comorbidity*
Hitni premještaj / *Emergency Transfer*
Komplikacije / *Complications*
Smrtnost / *Mortality*

TO LINK TO THIS ARTICLE: https://doi.org/10.24869/spsih.2019.380

UVOD

Zbog starenja pučanstva, raste i udio starije populacije u bolnicama. Uz stariju dobnu skupinu gotovo redovito je vezan i veći broj kroničnih somatskih bolesti.Kod osoba s demencijom, u odnosu na istu dobnu skupinu bez demencije, još je veća učestalost komorbiditeta (1,2).

Kod osoba s demencijom početak somatske dekompenzacije može dovesti do psihičkog pogoršanja (npr. delirantnog stanja) i rezultirati hospitalizacijom na akutnom psihijatrijskom odjelu (3,4). S obzirom da kod osoba s demencijom somatska dekompenzacija može imati atipičnu kliničku sliku (npr. pneumonija bez febriliteta) i razvijati se vrlo brzo, neophodno je na vrijeme prepoznati problem (5). Potrebno je naglasiti da kod ovih bolesnika, čak i diskretna promjena u okruženju, a osobito dolazak na akutni odjel, može dodatno nepovoljno utjecati na psihičko i somatsko stanje bolesnika, uzrokovati komplikacije, intenzivno somatsko liječenje, dužu hospitalizaciju i veće troškove (1,2,6).

INTRODUCTION

Due to the aging of the population, the proportion of the elderly in hospitals is increasing. The elderly population is also often associated with a greater number of chronic somatic diseases, especially for patients suffering from dementia (1,2). For dementia patients, the onset of somatic decompensation may lead to mental decompensation (e.g. delirious conditions) and result in hospitalization in an acute psychiatric ward (3,4). Having in mind that somatic decompensations of dementia patients can have an atypical clinical presentation (e.g. pneumonia without febrility) and can develop very quickly, it is necessary to identify the condition timely (5). It should be emphasized that in these patients, even a discrete environmental change, and especially admission to the acute ward, can additionally adversely affect the mental and somatic condition of the patient, causing somatic complications requiring intensive somatic treatment, longer hospitalization, and higher costs (1,2,6).

BOLESNIC I METODE

U ovom retrospektivnom istraživanju analizirali smo podatke o bolesnicima s demencijom koji su liječeni na Odjelu psihogerijatrije Klinike za psihijatriju Vrapče od 1. siječnja do 31. kolovoza 2019. godine, s posebnim naglaskom na razlog pogoršanog somatskog stanja koje je zahtijevalo premještaj. Iz medicinske dokumentacije se evidentirala dob, spol, trajanje aktualne hospitalizacije, ishod liječenja. Koristila se deskriptivna statistička metoda.

REZULTATI

Od početka siječnja do kraja kolovoza 2019. godine na Odjel psihogerijatrije Zavoda za biologijsku psihijatriju Klinike za psihijatriju Vrapče zaprimljeno je ukupno 256 bolesnika: 174 žene (67,97 %) i 82 muškarca (32,03 %). Prosječna dob žena bila je 80,5 godina (od 55 do 97 godina), a muškaraca 76,4 godina (od 56 do 95 godina).

Zbog dekompenziranih tjelesnih stanja koja su zahtijevala premještaj na somatski odjel (drugu bolnicu) u promatranom je razdoblju premješteno 28 % svih bolesnika (40,2 % muškaraca i 23 % žena), a od toga 39 % u prvih sedam dana od dolaska u bolnicu. Prosječno trajanje hospitalizacije u slučaju premještaja u somatsku bolnicu bilo je kod muškaraca 13,7 dana (događalo se od 1. do 60. dana), a kod žena 18,85 dana (događalo se od 1. do 67. dana). Prosječno trajanje hospitalizacije kod svih bolesnika na Odjelu psihogerijatrije u tom je razdoblju bilo kod muškaraca 33,08 dana, a kod žena 36,47 dana.

U istom je razdoblju na Odjelu zbog posljedica komorbiditeta sa somatskim bolestima preminulo ukupno 28 bolesnika (10,93 %; od toga 12,2 % muškaraca i 10,34 % žena). Od toga je u prvih pet dana od dolaska u bolnicu preminulo 25 %.

PATIENTS AND METHODS

In this retrospective study, we analysed the data of the patients with dementia hospitalized on the psychogeriatric ward of the University Psychiatric Hospital Vrapče between 1 January and 31 August 2019, with special emphasis on the reason for the deterioration of the somatic condition which required transfer to somatic wards of other hospitals. The following variables were extracted from the patients' medical notes: age, sex, length of the current hospitalization, and the outcome of treatment. A descriptive statistical method was used.

RESULTS

Between 1 January and 31 August 2019, a total of 256 patients were admitted to the psychogeriatric ward at the UPHV. 174 were female (67.97%) and 83 male (32.03%). The average age was 80.5 years (55 to 97 years) for female patients and 76.4 years (56 to 95 years) for male patients.

28% of all admitted patients (40.2% of all male and 23% of all female patients) were transferred to somatic wards in other hospitals due to the decompensated physical condition, and 39% of those transfers occurred within the first seven days after the admission to the UPHV. The average hospitalization duration of transferred patients before the transfer was 13.7 days for male patients (the shortest was 1 day and the longest was 60 days) and 18.85 days for female patients (the shortest was 1 day and the longest was 67 days). The average duration of hospitalization for all patients in the observed period at the psychogeriatric ward was 33.08 days for male and 36.47 for female patients.

In the same period, a total of 28 patients (10.93%) died at the psychogeriatric ward (10.34% of all female patients and 12.2% of all male patients) as a result of the deterioration of the physical condition, 25% of whom died within the first five days after the admission to the UPHV.

Prema trenutačnim podatcima upala pluća bila je uzrok premještaja u somatsku bolnicu u 19 % slučajeva.

According to current data, pneumonia was the main reason for patient transfer in 19% of all transferred patients.

DISKUSIJA

Ovim smo istraživanjem ustanovili da se na Odjel psihogerijatrije zaprimi više žena s demencijom u odnosu na muškarce (čak dvostruko) što je bilo za očekivati s obzirom na njihov duži životni vijek i veću učestalost demencije (7,8). To je potvrdila i nešto veća prosječna dob ispitivanih žena, iako se dobni raspon nije bitno razlikovao među spolovima.

Kod muških bolesnika s demencijom, zbog komorbiditeta i razvijenih somatskih komplikacija bila je dvostruko veća učestalost upućivanja u somatske bolnice i nešto veći broj preminulih u odnosu na žene. To, međutim, ne znači da se kod žena javljalo manje somatskih komplikacija, već da je ishod liječenja bio bolji. Chen i sur. navode da su komplikacije i smrtnost kod hospitaliziranih muškaraca s demencijom 2,9 puta veći u odnosu na žene. Osim muškog spola, ostali čimbenici koji povećavaju smrtnost bolesnika s demencijom nakon njihovog dolaska u bolnicu su starija dob, delirantni simptomi i deluzije, a najčešći uzrok smrti je pneumonija (9).

U promatranom razdoblju, zbog pogoršanja tjelesnog stanja koje je bilo toliko značajno da je zahtijevalo premještaj u somatsku bolnicu, premješteno je 28 % bolesnika, od toga čak 39 % u prvih sedam dana od početka hospitalizacije, a preminulo je 10,9 % bolesnika, od toga 25 % unutar prvih pet dana od početka hospitalizacije. Ovi podatci potvrđuju da je vrlo često u podlozi delirantnih stanja, koja su najčešća indikacija za prijam dementnih bolesnika na psihijatrijski odjel, somatska dekompenzacija koja u ovoj populaciji može imati atipičnu kliničku sliku i brzi razvoj. U literaturi se navodi da bolesnici s demencijom koji su podvrgnuti operaciji imaju više postoperacijskih komplikacija koje je posebno teško prepoznati u ra-

DISCUSSION

The study showed that more women with dementia than men (more than twice) were admitted to the psychogeriatric ward, which was expected due to their longer life expectancy and higher incidence of dementia (7,8). This was also confirmed by the slightly higher average age among female patients, although the age span did not significantly differ between the sexes.

Male dementia patients were twice more likely to be transferred to somatic wards of other hospitals due to the comorbidities and somatic complications and also had a higher number of deaths than female dementia patients. However, female patients did not have fewer somatic complications, but the outcome of treatment seemed to be better. Chen et al. state that the complications and mortality of hospitalized male dementia patients were 2.9 times higher than those of female patients. Other factors associated with higher mortality of the dementia patients are older age, delirious symptoms and delusions, and pneumonia as the most common cause of death (9).

In the observed period, we found that 28% of all patients were transferred to other hospitals due to a severe deterioration of their physical condition, 39% of whom were transferred within the first seven days after the admission to the psychogeriatric ward. 10.9% of all admitted patients died, 25% of whom died within the first five days of hospitalization. These findings confirm that somatic deterioration is very often underlying delirious conditions, which are the most common indication for the admission of dementia patients to psychiatric wards. Somatic deterioration in this group of patients can have an atypical clinical presentation and rapid development, and those patients can also develop multiple postoperative complications that are particular-

nim fazama bolesti (npr. pneumonija, upala mokraćnog sustava, akutno renalno zatajenje, septikemija) (5).

Takacs i sur. u svom radu navode da je 44 % bolesnika s demencijom nakon dolaska na psihijatrijski odjel zbog tjelesnog pogoršanja moralo bilo premješteno na somatski odjel, od toga 12 % unutar prva tri dana, odnosno da je 5 % preminulo brzo nakon prijama na psihijatrijski odjel. Zaključuju da su kod ove skupine bolesnika prije prijama na psihijatrijski odjel neophodni tjelesni pregled i laboratorijska obrada (10).

Zaista, ovi podatci upozoravaju na potrebu dijagnostičke obrade i liječenja dementnih bolesnika u somatskim bolnicama prije hospitalizacije na psihijatrijskom odjelu. Sam pregled bolesnika s demencijom u hitnoj internističkoj, neurološkoj ili kirurškoj ambulanti, nažalost nije garancija da je somatsko stanje bolesnika stabilno te vrlo često bude predskazatelj nepovoljnog tijeka liječenja nakon što bolesnik bude hospitaliziran na psihijatrijskom odjelu. Iako se rutinskom laboratorijskom obradom odmah nakon dolaska na odjel, detaljnim somatskim pregledom i opservacijom bolesnika dijagnosticiraju somatska stanja, često zbog brzog razvoja kliničke slike dolazi do tjelesnih dekompenzacija.

U literaturi se također navodi da starije osobe općenito, kada su hospitalizirane, imaju povećan rizik od pojave hospitalnih komplikacija (padovi, upala pluća, upala mokraćnog sustava, delirantna stanja) (6). Komplikacije dovode do dužeg zadržavanja u bolnici, što opet povećava rizik od novih komplikacija te na kraju lošeg ishoda liječenja, ali i većih troškova. Učinak komorbiditetnih dijagnoza se zbraja, a među svim dijagnozama ključna je demencija. Bolesnici s demencijom imaju gotovo dvostruko više komplikacija u odnosu na bolesnike bez demencije (6). Također se u literaturi navodi mogući utjecaj benzodiazepina i antipsihotika na veću sklonost razvoju pneumonije kod hospitaliziranih bolesnika s demencijom, pa je

ly difficult to identify in the early stages of the disease (e.g. pneumonia, urinary tract inflammation, acute renal failure, septicaemia) (5).

Takacs et al. found that 44% of patients with dementia had to be transferred to somatic wards after being admitted to the psychiatric ward, 12% within the first three days, with 5% of them dying shortly after the admission to the psychiatric ward. They conclude that for this group of patients, physical examination and laboratory processing need to be completed before admission to psychiatric wards (10).

Indeed, these data point to the need for the diagnostic treatment and treatment of dementia patients in somatic hospitals prior to hospitalization on a psychiatric ward. Examination of patients with dementia in an emergency clinic for internal medicine, neurology, or surgery unfortunately does not guarantee that the somatic condition of the patient is stable, which is often a predictor of an unfavourable course of treatment after the patient has been hospitalized in a psychiatric ward. Although somatic conditions are diagnosed immediately upon arrival on the ward in routine laboratory processing and detailed physical examination and patient observation, physical decompensation often occurs due to the rapid development of the clinical picture. Studies have found that the elderly population, when hospitalized, is at an increased risk of hospital complications (falls, pneumonia, urinary tract infections, delirious conditions) (6). Complications lead to longer hospitalization, which again increases the risk of new complications and ultimately poor treatment outcome and higher costs. When the effects of comorbidity diagnoses are summed up, dementia is of key importance among all diagnoses. Patients with dementia have almost twice as many complications than patients without dementia (6). The potential impact of benzodiazepines and antipsychotics on the greater risk for developing pneumonia in hospitalized patients with dementia has also been reported, so it is certainly necessary to consider the cost-benefit of their use (11,12). Patients

svakako neophodno uzeti u obzir omjer koristi i štete njihove primjene (11,12). Bolesnici s demencijom su specifična psihijatrijska skupina koja zahtijeva oprezan terapijski pristup zbog njihove dobi, čestog komorbiditeta i uzimanja različitih medikamenata, većeg rizika od nuspojava i interakcije među lijekovima (2).

Zbog svega toga preporuča se ostaviti hospitalizaciju samo za slučajeve kada ambulantno liječenje ne daje rezultate, jer svaki dolazak bolesnika s demencijom u bolnicu otvara mogućnosti neželjenih događaja (2,4,13-16).

U ovom smo istraživanju planirali analizirati koja su somatska stanja zahtijevala premještaj na somatski odjel. Dosadašnjom obradom podataka upala pluća je u 19 % slučajeva bila uzrok premještaja u somatsku bolnicu. Od ostalih uzroka navodila se respiratorna insuficijencija, upala mokraćnog sustava, sepsa, renalno zatajenje... Međutim, zbog velikog broja psihijatrijskih dijagnoza koje prethode somatskim, a također i neujednačenosti upisivanja redoslijeda dijagnoza nismo uspjeli dobiti relevantni podatak zbog kakvog somatskog stanja je bolesnik premješten. Zbog toga se planira provesti iscrpnije istraživanje kojim bi se, osim detaljnije analize prve i ostalih komorbiditetnih dijagnoza, evidentirala indikacija za hospitalizaciju, zatim odakle pacijent dolazi na prijam (od kuće, iz doma, nakon pregleda ili liječenja u somatskoj bolnici), vrsta i težina demencije te vrste ordiniranih psihofarmaka tijekom hospitalizacije.

ZAKLJUČAK

U bolesnika s demencijom se često u kratkom razdoblju od dolaska u bolnicu pojave tjelesne dekompenzacije koje zahtijevaju njihov premještaj na somatski odjel ili dovode do smrtnog ishoda. Rezultati ovog rada naglašavaju važnost specifičnog odnosa somatskih komorbiditeta kod bolesnika s demencijom u odnosu na drugu populaciju, teže prepoznavanje početka komplikacija, te značajno bržu progresiju simptoma.

with dementia are a specific psychiatric group, requiring a cautious therapeutic approach which takes into account their age, frequent comorbidities, usage of various medications, increased risk of side effects, and drug interaction (2).

Due to all these reasons, it is recommended to consider hospitalization only in cases where outpatient treatment does not produce results, as each hospital admission of patients with dementia increases the risk of adverse events (2,4,13-16).

In this study, we planned to assess which somatic conditions required transfer from psychiatric to somatic wards. Available data showed pneumonia was the cause of 19% of transfers to somatic wards of other hospitals. Other causes include respiratory failure, urinary tract infections, sepsis, renal failure, etc. However, due to the large number of psychiatric diagnoses preceding somatic ones and lack of uniform order of registering diagnoses, we were unable to obtain relevant information on the transferred patient's somatic status. Therefore, there are plans to conduct a more comprehensive study which would include a more detailed analysis of the first diagnosis and other comorbid diagnoses, indications for hospitalization, information on where the patient was referred to hospital from (home, retirement home, after examination or treatment in a somatic hospital), the type and severity of dementia, and types of psychopharmaceuticals administered during hospitalization.

CONCLUSION

In dementia patients, physical decompensations can often occur within a short period of time after their admission to hospital, which then require the patient's transferral to a somatic ward or lead to a fatal outcome. The results of this study emphasize the importance of a specific relationship between somatic comorbidities in dementia patients when compared to other populations, more difficult detection of the onset of complications, and significantly faster progression of symptoms.

LITERATURA/*REFERENCES*

1. Vogelgsang J, Wolff-Menzler C, Kis B, Abdel-Hamid M, Wiltfang J, Hessmann P. Cardiovascular and metabolic comorbidities in patients with Alzheimer's disease and vascular dementia compared to a psychiatric control cohort. Psychogeriatrics 2018; 18(5): 393-401.
2. Clodomiro A, Gareri P, Puccio G, Frangipane F, Lacava R,Castagna A *et al*.Somatic comorbidities and Alzheimer's disease treatment. Neurol Sci 2013; 34(9):1581-9.
3. Herceg M, Sisek-Šprem M, Puljić K, Herceg D. Hitna stanja kod demencije i psihičkih poremećaja u starijoj životnoj dobi, Soc psihijat 2019; 47: 185-98.
4. Sisek-Šprem M, Kušan Jukić M, Mimica N. Bolničko liječenje osoba s Alzheimerovom bolešću i drugim demencijama. U: Tomek-Roksandić S, Mimica N, Kušan Jukić M (ur). Alzheimerova bolest i druge demencije-rano otkrivanje i zaštita zdravlja. Zagreb: Medicinska naklada, 2017, str.154-8.
5. Hu CJ, Liao CC, Chang CC, Wu CH, Chen TL. Postoperative adverse outcomes in surgical patients with dementia: a retrospective cohort study. World J Surg 2012; 36(9): 2051-8.
6. Bail K, Draper B, Berry H, Karmel R, Goss J. Predicting excess cost for older inpatients with clinical complexity: A retrospective cohort study examining cognition, comorbidities and complications. PLoS One 2018; 23: 13(2).
7. Ikram AM, Brusselle GO, Murad SV, Van Duijn, Franco OH, Goedegebure A *et al*. The Rotterdam Study: 2018 update on objectives, design and main results. Eur J Epidemiol 2017; 32: 807-50.
8. Tomek-Roksandić S, Tomasović-Mrčela N, Mimica N, Šoštar Z, Kušan Jukić M, Benjak T i sur. Značenje registra za Alzheimerovu bolest i druge demencije u starijih osoba. U: Tomek-Rosandić S, Mimica N, Kušan Jukić M (ur). Alzheimerova bolest i druge demencije-rano otkrivanje i zaštita zdravlja. Zagreb:Medicinska naklada, 2017, str. 14-36.
9. Chen R, Chien WC, Chu H, Chiu HL, Chung CH, Yang CY *et al.* Risk Factors in psychiatric inpatient with dementia: A 13-year long-term data analysis. Neuropsychiatry 2018; 8(3): 930-41.
10. Takacs R, Ungvari GS, Gazdag G. Reasons for acute psychiatric admission of patients with dementia. Neuropsychopharmacol Hung 2015; 17(3): 141-5. 2015; 17(3): 141-5.
11. Tolppanen AM, Koponen M, Tanskanen A, Lavikainen P, Sund R, Tiihonen J *et al*. Antipsychotic use and risk of hospitalization or death due to pneumonia in persons with and those without Alzheimer disease. Chest 2016; 150(6): 1233-41.
12. Taipale H, Tolppanen AM, Koponen M, Tanskanen A, Lavikainen P, Sund R *et al*. Risk of pneumonia associated with incident benzodiazepine use among community-dwelling adults with Alzheimer disease. CMAJ 2017; 10;189(14): E519-29.
13. Dwyer R, Gabbe B, Stoelwinder JU, Lowthian J. A systematic review of outcomes following emergency transfer to hospital for residents of aged care facilities. Age Ageing 2014; 43(6): 759-66.
14. Sousa P, Uva AS, Serranheira F, Uva MS, Nunes C.Patient and hospital characteristics that influence incidence of adverse events in acute public hospitals in Portugal: a retrospective cohort study. Int J Qual Health Care 2018; 30(2): 132-7.
15. Yates M, Watts JJ, Bail K, Mohebbi M, MacDermott S, Jebramek JC *et al*. Evaluating the impact of the dementia care in hospitals program (DCHP) on hospital-acquired complications: Study protocol. Int J Environ Res Public Health. Int J Environ Res Public Health 2018; 30: 15(9).
16. George J, Long S, Vincent C. How can we keep patients with dementia safe in our acute hospitals? A review of challenges and solutions. J R Soc Med 2013; 106(9): 355-61.

Starija životna dob u hrvatskoj kliničkoj praksi nije diskriminirajući čimbenik za transplantaciju jetre

/ Older Age in Croatian Clinical Practice is not Discriminative Factor for Liver Transplantation

Miloš Lalovac[1], Tajana Filipec Kanižaj[1,2], Stanka Mejić Krstulović[3], Nikola Sobočan[1,2], Dubravka Kalinić[2,4]

[1]Klinička bolnica Merkur, Zagreb, [2] Sveučilište u Zagrebu, Medicinski fakultet, Zagreb, [3]Klinička bolnica Sahlgrenska, Klinička fiziologija, Goteborg, Švedska, [4]Klinika za psihijatriju Vrapče, Referentni centar Ministarstva zdravstva za Alzheimerovu bolest i psihijatriju starije životne dobi, Zagreb, Hrvatska

/ [1]*University Hospital Merkur, Zagreb,* [2]*University of Zagreb, School of Medicine, Zagreb,* [3]*Clinical Hospital Sahlgrenska, Clinical Physiology, Goteborg, Sweden,* [4]*University Psychiatric Hospital Vrapče, Referral Centre for Alzheimer's Disease and Old Age Psychiatry, Zagreb, Croatia*

Transplantacija jetre je oblik terapije kod ireverzibilnog akutnog ili kroničnog zatajenja jetre. Bolje liječenje brojnih bolesti rezultiralo je produženjem životnog vijeka s posljedičnim starenjem populacije. Valja naglasiti da ne postoji dobna granica kako za primatelja tako ni za davatelja organa kod transplantacijskog liječenja, pa se sve češće radi o starijim primateljima/davateljima organa. Cilj ovog rada je utvrditi udio bolesnika starijih od 65 godina liječenih transplantacijom jetre u ukupnom broju jednako liječenih bolesnika, te prikazati vrstu i učestalost komplikacija ovakvog liječenja. Od 1. siječnja 2013 do 1. rujna 2019. godine u KB Merkur transplantacijom jetre liječeno je ukupno 746 bolesnika od kojih je 206 (27,6 %) bilo starije od 65 godina. U toj podskupini bolesnika najčešća indikacija za transplantaciju jetre bila je primarna neoplazma jetre (44,2 %), potom alkoholna bolest jetre (29,6 %), dok su ostale indikacije bile prisutne u 26,2 % bolesnika. Mortalitet tijekom zahvata ili u posttransplantacijskom praćenju u ovoj podskupini bolesnika iznosio je 31 %. Najčešći uzroci smrti bile su: infekcije, sepsa i multiorgansko zatajenje. Kao zaključak može se reći da životna dob bolesnika nije kontraindikacija za transplantacijsko liječenje, osobito kod bolesnika kojima je to jedina metoda liječenja bolesti u vitalnoj indikaciji. Psihijatrijska procjena je važan i sastavni dio pre- i posttransplantacijske faze praćenja bolesnika.

/ Background: Liver transplantation is a method of treatment for irreversible end-stage liver insufficiency. Improved treatment of various diseases has led to the extension of life expectancy and consequently older world population. It must be pointed out that there is no age limit either for organ donation or organ transplantation. Since the population is getting older, today more and more patients who receive liver transplantation are elderly patients. The aim of this study was to show the percentage of elderly patients who received liver transplantation in our centre, as well as to analyse the rate and type of complications of the treatment. The study was retrospective, and included patients treated by liver transplantation in the period between January 1, 2013 and September 1, 2019 at the University Hospital Merkur. There were 746 treated patients, 206 of whom (27.6%) were elderly (>65 years) patients. The main indication for the treatment was primary liver neoplasm (44.2%), followed by alcohol liver disease (29.6%), and other indications (26.2%). The mortality rate during operation and in the post-transplantation follow up period was 31%. The most frequent cause of death were infections, sepsis, and multiorgan failure. Conclusion: Older age is not a contraindication for liver transplantation, especially if it is a lifesaving procedure. Psychiatric assessment is an important and integral part of the pre- and post-transplantation follow-up phase.

ADRESA ZA DOPISIVANJE / *CORRESPONDENCE*:
Dr. sc. Miloš Lalovac, dr. med.
Klinička bolnica Merkur
Zavod za gastroenterologiju
10 000 Zagreb, Hrvatska
E-pošta: m_lalovac@net.hr

KLJUČNE RIJEČI / *KEY WORDS*:
Jetra / *Liver*
Psihijatrijska procjena / *Psychiatric Assessment*
Starija životna dob / *Old Age*
Transplantacija / *Transplantation*

TO LINK TO THIS ARTICLE: https://doi.org/10.24869/spsih.2019.387

UVOD

Prvu transplantaciju jetre učinio je Thomas Starzl 1963. godine. Od tada pa do danas svake godine povećava se broj transplantacija jetre, jednim dijelom zbog sve većeg broja indikacija za takvo liječenje, a sigurno i zbog većeg broja bolesnika koji su pogodni za ovakav izbor liječenja (1). U liječenje transplantacijom jetre, uz sam kirurški zahvat presađivanja organa, spadaju i procjena potrebe za takvim liječenjem, potvrda o provedenim iscrpnim mjerama konzervativnog liječenja, kao i detaljna klinička tjelesna i psihijatrijska obrada svakog potencijalnog kandidata u samom transplantacijskom centru (2).

U našem transplantacijskom centru posljednjih se godina obavi u prosjeku preko 100 transplantacija jetre godišnje. Rastom broja transplantacija sve češće se radi o primateljima organa koji su stariji od 65 godina (u daljem tekstu "u starijoj životnoj dobi"). Unatoč svim napretcima u liječenju komplikacije transplantacijskog liječenja ipak su češće u bolesnika starije životne dobi nego u mlađih, neovisno o bolesti koja je uzrokovala zatajenje jetre (3).

Treba imati na umu da je istodobno sve starija i dob davatelja organa o čemu posebno treba voditi računa prigodom alokacije organa (4). Pažljivim probirom starijih bolesnika danas je korist transplantacije jetre jednaka kako kod mlađih tako i kod starijih bolesnika (5).

INTRODUCTION

The first liver transplantation was performed by Thomas Starzl in 1963. Since then, the number of liver transplantations has been steadily rising, at least in part due to the expanding field of indications for such treatment (1). More and more patients suffering from end-stage liver insufficiency can be stabilized by medicamentous therapy enough to be suitable candidates for transplantation. Apart from the operation/transplantation itself, there are several important steps within the transplantation process, for example physical and psychiatric evaluation of the patient, indication for transplantation, evidence that conservative measures were applied but without beneficial effect, diagnostic evaluation of the patient in a transplantation centre, etc. (2).

On average, one hundred liver transplantations are performed in our centre per year. With a rise in the number of procedures, as well as with improved selection of the patients and preoperative assessment and treatment of these patients, more and more elderly patients (defined as older than 65 years) are treated by transplantation. Even with all these improvements they still have a higher rate of complications related to transplantation treatment than younger patients, regardless of the disease that caused liver insufficiency (3).

At the same time, donors are also older than before, which should be specifically taken into

U Kliničkoj bolnici Merkur jedini kriterij za transplantacijsko liječenje je težina jetrene bolesti, a danas najčešća indikacija za transplantaciju jetre je primarna neoplazma jetre (hepatocelularni karcinom), potom slijedi alkoholna bolest jetre, te dalje autoimune bolesti, virusne bolesti (hepatitis B i C), sekundarna bilijarna ciroza, policistična bolest, Budd Chiarijev sindrom i dr. (6).

Poboljšanjem probira bolesnika, boljim mogućnostima medikamentne terapije i usavršavanjem tehnike transplantacije došlo je do smanjenja pojave postoperacijskih komplikacija, a time je i život bolesnika nakon transplantacije jetre postao kvalitetniji (7). Pri tom se ne smije zaboraviti da bolesnici dolaze u naš centar obično u teškom općem stanju s prisutnim brojnim komplikacijama dekompenzirane ciroze jetre. Ako periproceduralni tijek prođe uredno, čak i kod takvih bolesnika, dolazi do značajnog fizičkog i psihičkog poboljšanja i ozdravljenja.

Kod većine bolesnika nakon transplantacije jetre dolazi do značajnog porasta tjelesne težine, što se ranije smatralo pozitivnim pokazateljem. Međutim, danas se zna da takvo dobivanje na tjelesnoj težini tijekom dužeg vremena nosi bolesniku više rizika nego koristi (8).

Transplantacijska medicina je multidisciplinska struka u kojoj zajednički rade liječnici različitih specijalnosti (kirurzi, internisti, psihijatri, anesteziolozi, radiolozi, patolozi, mikrobiolozi, transfuziolozi), medicinski tehničari, medicinske sestre instrumentarke i ostali. Psihijatrijska potpora ključna je u bolesnikovom prihvaćanju vlastite bolesti, činjenice da je presađivanje organa neophodno, kao i u bržem oporavku nakon transplantacije. Važno je da bolesnik u cijeli postupak ulazi s punim povjerenjem s obzirom da se radi o jednom od najsloženijih oblika liječenja danas (9). Stoga je i razgovor s psihijatrom nužan. Na taj način bolesnik bolje shvaća vlastitu bolest i prihvaća transplantaciju kao jedinu metodu liječenja sa svim komplikacijama koje ona nosi (10).

account during allocation of organs (4). With improved selection, especially of older patients, the benefit of liver transplantation is today almost the same for elderly and younger patients (5).

Therefore, in our clinic age itself is not a criterium nor a contraindication for liver transplantation, and the decision is made based on the disease that caused liver failure.

In our facility, the main indication for liver transplantation is primary liver neoplasm (hepatocellular carcinoma), followed by alcohol liver disease, autoimmune liver disease, viral liver diseases (hepatitis B and C), secondary biliary cirrhosis, polycystic disease, Budd Chiari syndrome, and other liver diseases (6).

With improved patient selection, better medicamentous and other preoperative assessment and treatment of the patient, improved operative techniques, postoperative complications have been diminished, while the quality of life after procedure has also been improved (7). It should be mentioned that the patients referred to our centre are often in life-threatening conditions, with numerous complications of advanced liver disease. If we manage to stabilize the patient and if the periprocedural course is good, even such patients usually recover quickly. Weight gain was previously considered a positive sign, but today it is known that weight gain over a longer time period also has negative effects (8).

Transplantation medicine is a multidisciplinary branch in which many different types of doctors (surgeons, internal medicine specialists, psychiatrists, anaesthesiologists, pathologists), nurses, and other medical professionals need to work together. Teamwork is important in all steps of the process, for example during the patient's acceptance of the disease and the fact that organ transplantation is indicated, as well as in the recovery phase after the transplantation. It is of significant help it the patient un-

Kako je jedna od komplikacija uznapredovalog zatajenja jetre hepatalna encefalopatija koja se može manifestirati čitavim nizom psihijatrijskih i neuroloških poremećaja (od minimalnih promjena osobnosti, pospanosti, usporenog govora preko poremećaja kognitivnih funkcija, neuromuskularne neusklađenosti i tremora do sopora i kome) zadaća je psihijatra razlučiti radi li se o anksioznosti, depresiji, halucinacijama i poremećajima ličnosti u sklopu hepatalne encefalopatije ili se pak radi o primarnim psihijatrijskim poremećajima ličnosti, koje pak nisu uzrokovane metaboličkim ili elektrolitskim disbalansom kao posljedica jetrene bolesti (11).

Nakon transplantacije bolesnici trebaju uzimati imunosupresivne lijekove od kojih su danas najznačajniji kalcineurinski inhibitori, kortikosteroidni te mikofenolat-mofetil. Međutim i lijekovi, posebno prve dvije navedene skupine uzrokuju česte psihijatrijsko-neurološke nuspojave, od smetenosti, depresije i smetnji raspoloženja pa do duševnih poremećaja. To je osobito često u bolesnika liječenih kalcineurinskim inhibitorima. Sigurno da je situacija jednostavnija, ako se navedene nuspojave razviju kao odgovor na kortikosteroidnu terapiju jer se ona može reducirati, a potom tijekom 2 - 3 mjeseca i u potpunosti izostaviti iz terapije (12).

Upravo zajedničkim, timskim radom liječenje postaje sigurnije, kvalitetnije, uz mogućnosti prilagodbe liječenja bolesniku, pa je stoga i bolji postotak preživljenja jetrenog presatka i samog primatelja (13).

CILJ ISTRAŽIVANJA

Cilj ovog rada bio je utvrditi udio bolesnika starijih od 65 godina liječenih transplantacijom jetre u ukupnom broju ovako liječenih bolesnika, te prikazati vrstu i učestalost komplikacija ovakvog liječenja.

derstands and is motivated to go through such treatment (9).

Therefore, consultation with a psychiatrist is an integral part of patient selection. There are also other reasons why this is an integral part of the assessment of the patients (10).

Many patients already have portal encephalopathy with different clinical presentations: from minimal personality changes, somnolence, slower speech, cognitive dysfunction, neuromuscular problems such as tremors to the soporous or comatose state. The role of a psychiatrist is to differentiate between anxiety, depression, hallucinations, and personality changes as part of portal encephalopathy and primary psychiatric disease not caused by metabolic or electrolyte disbalance (11).

After transplantation, patients are treated by three different immunosuppressive medications: calcineurin inhibitors, corticosteroids, and mycophenolate mofetil. The first two groups of medications can have significant psychiatric-neurologic side effects (ranging from confusion, depression, and mood changes to serious mental problems), especially calcineurin inhibitors. It is easier if side effects are caused by corticosteroid therapy since this therapy can be reduced and discontinued completely after 2-3 months (12).

Teamwork and a multidisciplinary approach make the treatment safer, better, individualised, with better results of the treatment in terms of lower graft loss rates, as well as lower incidence of side effects of the therapy (13).

STUDY AIM

The aim of this study was to show the percentage of the elderly patients treated by liver transplantation in our centre as well as to analyse the rate and type of complications of the treatment.

METODA ISTRAŽIVANJA

U studiju su uključeni svi bolesnici liječeni kadaveričnom ortotopnom transplantacijom jetre u Kliničkoj bolnici Merkur, Zagreb u razdoblju od 1. siječnja 2013 do 1.rujna 2019. Analiziran je ukupan broj ovako liječenih bolesnika kao i udio bolesnika starijih od 65 godina s osvrtom na indikacije za ovakvo liječenje, učestalost komplikacija osnovne bolesti (tumori, hepatitis C) te postoperacijskih infekcija kao glavnog uzroka smrti.

REZULTATI

Prva transplantacija jetre u Kliničkoj bolnici Merkur učinjena je 1998. godine. Od tada do danas broj je transplantacija u stalnom porastu. To najbolje pokazuje podatak da je između 1998. i 2007. godine učinjeno ukupno oko 200 transplantacija jetre, a od 2011. godine se svake godine učini više od 100 transplantacija jetre. Najveći broj obavljenih zahvata zabilježen je 2015. godine, kada je učinjeno ukupno 130 transplantacija jetre. U analiziranom razdoblju 746 bolesnika liječeno je transplantacijom jetre, od kojih je 206 (27,6 %) bolesnika ili svaki četvrti bolesnik bio stariji od 65 godina. U toj podskupini bolesnika najčešća indikacija za transplantaciju jetre bila je primarna neoplazma jetre - kod 91 (44,2 % bolesnika starije dobi), potom je slijedila alkoholna bolest jetre - kod 61 (29,6 % bolesnika starije dobi), a sve ostale indikacije bile su prisutne u preostala 54 bolesnika (26,2 % bolesnika starije dobi).

Mortalitet tijekom zahvata ili u daljem posttransplantacijskom praćenju u skupini osoba starije životne dobio iznosio je 31 % (odnosno 64 bolesnika su umrla), a najčešći uzroci smrti bile su: komplicirane infekcije, sepsa i multiorgansko zatajenje.

RASPRAVA

Transplantacija jetre je metoda kojom se sve češće i sve uspješnije liječe bolesnici s ireverzibilnim akutnim ili kroničnim zatajenjem jetre

METHODS

The study included patients treated by cadaveric orthotopic liver transplantation in Clinical Hospital Merkur Zagreb in the period between January 1, 2013 and September 1, 2019. The number of patients treated by liver transplantation, the percentage of elderly patient, as well as the analysis of indications for such treatment and the rate of complications of the main disease (tumour, hepatitis C) and postoperative infections as the main cause of death were analysed.

RESULTS

The first liver transplantation in Clinical Hospital Merkur was performed in 1998. Since then, the number of procedures per year has been steadily rising. Between 1998 and 2007 altogether 200 liver transplantations were performed, while for the last 8 years more than 100 liver transplantations a year have been performed. The most liver transplantations were performed in 2015, when 130 liver procedures were conducted. In the analysed period, 746 patients were treated by liver transplantation, 206 of whom were elderly patients, which makes every forth patient an elderly one. The indications for liver transplantation in the group of elderly patients were primary liver neoplasm, 91 of them (44.2%), followed by alcohol liver disease, 61 of them (29.6%), while other indications accounted for 26.2% (54 patients).

The mortality rate during the procedure and during the post-transplantation follow-up period was 31% in this age group (64 patients died). The main causes of death were infections, sepsis, and multiorgan failure.

DISCUSSION

Liver transplantation is a method which is used increasingly often and with more success in the treatment of patients with end-stage irrevers-

(14). Iako je broj transplantacija u stalnom porastu, i dalje je puno veći broj bolesnika kojima je potrebna transplantacija od broja učinjenih (15). Univerzalni problem u cijeloj transplantacijskoj medicini, a time i u transplantaciji jetre je nedostatak davatelja. To bi se moglo popraviti podizanjem svijesti populacije o potrebi darivanja organa te o izvrsnosti liječenja ovom metodom (16).

Starenjem populacije povećava se broj bolesnika starijih od 65 godina kojima se transplantacijom jetre može spasiti život (17). Pri tome je poznato da je kod ovih bolesnika komorbiditet značajniji te posttransplantacijski mortalitet veći nego kod mlađih bolesnika (18).

Za dalje poboljšanje posttransplantacijskog preživljenja, uz sve napretke koje donosi razvoj medicinske znanosti, sve veću ulogu imat će socijalna-psihološka potpora bliskog okruženja odnosno obitelji koja je od iznimnog značenja za psihički i tjelesni oporavak nakon kirurškog zahvata (19).

Brzim oporavkom te kraćim boravkom u bolnici nakon kirurškog zahvata smanjuje se rizik infekcija koje su i dalje vodeća komplikacija u postoperacijskom oporavku, te povećavaju mortalitet osobito u prvom postoperacijskom mjesecu kada bolesnici primaju visoke doze imunosupresivne terapije (20).

Osim rizika infekcije, a ovisno o indikaciji za transplantaciju jetre, odnosno o osnovnoj bolesti, postoje i drugi rizici. Takav je, primjerice, rizik od recidiva alkoholne bolesti jetre (zbog ponovne konzumacije alkohola), te je kod takvih bolesnika nužan daljnji psihijatrijski tretman.

ZAKLJUČAK

U zadnje se vrijeme više važnosti pridaje biološkoj kondiciji nego kronološkoj životnoj dobi.

Kao zaključak može se reći da životna dob bolesnika nije kontraindikacija za transplantacij-

ible liver failure (14). Although the number of liver transplantations is steadily rising, the number of patients that are candidates for this type of treatment still exceeds the number of transplantations (15). As is the case with other organs, there is a lack of organ-donors. This could be improved by preventive educational activities about the need for organ donation and the improvement of treatment of patients with end-stage liver failure using this method (16).

As the population ages, the number of elderly patients suitable for liver transplantation is also rising (17). It is well known that these patients often have significant comorbidity and higher post-transplantation mortality rates (18).

In the improvement of post-treatment survival, along with all the advantages provided by the development of medical science, the social-psychological support of the environment and the family will have an increasingly important role in postoperative recovery of such patients (19).

It is well-known that shorter periods of hospitalization carry a lower risk for infection, which is the most significant and serious complication in the postoperative recovery phase (20).

Beside the risk of infection, there are other post-transplantation risks. For example, one such risk is the recurrence of alcoholic liver disease (due to re-consumption of alcohol), and such patients require further psychiatric treatment.

CONCLUSION

In recent times, increasingly greater importance has been given to biological fitness rather than chronological age.

In conclusion, it can be said that the age of the patient is not a contraindication for liver trans-

sko liječenje završne faze jetrene bolesti. Na životnu dob ni u kom slučaju ne gledamo kao na izolirani negativni prognostički čimbenik, a osobito ne u bolesnika kod kojih je transplantacija jetre metoda koja spašava život.

Kao jedan od centara izvrsnosti u transplantacijskom liječenju uvijek smo skloniji bolesniku reći *Da* nego *Ne*, pogotovo kada je transplantacija jedini izbor i jedina metoda liječenja bolesnika.

plantation as a method of treating end-stage liver disease. Age itself is not a contraindication for liver transplantation and is not considered negative prognostic factor in any patient, especially not in elderly patients for whom liver transplantation would be lifesaving procedure.

As a centre of excellence, we always tend to say Yes rather than No, especially when liver transplantation is the only choice and the only method of treating patients.

LITERATURA/*REFERENCES*

1. Song AT, Avelino-Silva VI, Pecora RA, Pugliese V, Dalburquerque LA, Abdala E. Liver transplantation: fifty years of experience. World J Gastroenterol 2014; 14:20(18): 5363-74.
2. Golfieri L, Gitto S, Vukotic R, Andreone P, Marra F, Morelli MC *et al*. Impact of psychosocial status on liver transplant process. Ann Hepatol 2019; 8(20) S1665-2681(19)32200-8.
3. Gomez Gavara C, Esposito F, Gurusamy K, Salloum C, Lahat E, Feray C *et al*. Liver transplantation in elderly patients: a systemic review and first meta-analysis. HPB (Oxford) 2019; 21(1): 14-25.
4. Mazaheri M, Mojtabaee M, Mohsenzadeh M, Shahryari S, Sadegh Beigee F. Liver donation from marginal donors: to donate or not to donate? Expo Clin Transplant 2019; 17(1): 254-6.
5. Gil E, Kim JM, Jeon K, Park H, Kang D, Cho J *et al*. Recipient age and mortality after liver transplantation: a population based cohort study. Transplantation 2018; 102(12): 2025-32.
6. Yesmembetov K, Muratova Z, Borovskiy S, Ten I, Kaliaskarova K. Budd-Chiari syndrome diagnosed in a patient listed for liver transplant and considered to be contraindicated for the operation. Expo Clin Transplant 2018; 16(1): 158-61.
7. Cannavo A, Passamonti SM, Vincenti D, Aurelio MT, Torelli R, Poli F *et al*. Quality of life before and after transplantation in solid organ recipients referred to the North Italy transplant program (NITp): a cross section study. Transplant Proc 2019; 51(6): 1692-98.
8. Diaz-Nieto R, Lykoudis Pm, Davidson BR. Recipient body mass index and infectious complications following liver transplantation. HPB (Oxford) 2019; 21(8): 1032-38.
9. Magistri P, Marzi L, Guerzoni S, Vandelli M, Mereu F, Ascari F *et al*. Impact of a multidisciplinary team on alcohol recidivism and survival after liver transplant for alcohol disease. Transplant 2019; 51(1): 187-9.
10. Dabrowska-Bender M, Kozaczuk A, Paczek L, Milkiewicz P, Stoniewski R, Staniszewska A. Patient quality of life after liver transplantation in terms of emotional problems and the impact of sociodemographic factors. Transplant Proc 2018; 50(7): 2031-8.
11. Ninan J, Feldman L. Ammonia levels and hepatic encephalopathy in patients with known chronic liver disease. Hosp Med 2017; 12(8): 659-61.
12. Pflugrad H, Schrader AK, Tryc AB, Ding X, Lanfermann H, Jackel E *et al*. Longterm calcineurin inhibitor therapy and brain function in patients after liver transplantation. Liver Transpl 2018; 24(1): 56-66.
13. Burra P, Ferrarese A. Health related quality of life in liver transplantation: another step forward. Transpl Int 2019; 32(8): 792-3.
14. Bizzaro D, Russo FP, Burra P. New perspective in liver transplantation: from regeneration to bioengineering. Bioengineering (Basel) 2019; 11: 6(3)6030081.
15. Samstein B, McElory LM. Agree on much, except it is time for change. Am J Transplant 2019; 19(7): 1912-16.
16. Iansante V, Mitry RR, Filippi C, Fitzpatrick E, Dhawan A. Human hepatocyte transplantation for liver disease current status and future perspectives. Pediatr Res 2018; 83(1-2): 232-40.
17. Kalra A, Kriss M, Francis P, Norvell JP. Con: patients of advanced age should not routinely undergo liver transplantation. Clin Liver Dis (Hoboken) 2019; 14(2): 70-3.
18. Keswani RN, Ahmed A, Keeffe EB. Older age and liver transplantation: a review. Liver Transpl 2004; 10(8): 957-67.
19. Medved V, Medved S, Skočić Hanžek M. Transplantation psychiatry: an overview. Psychiatr Danub 2019; 31(1): 18-25.
20. Heldman MR, Ngo S, Dorschner PB, Helfrich M, Ison MG. Pre and post-transplant bacterial infections in liver transplant recipients. Transpl Infect Dis 2019; 29: e1352.

Palijativni pristup medicinske sestre kod osoba s demencijom

/ Nurses' Palliative Approach to People with Dementia

Senka Repovečki[1,2], Marija Džinić[3]

[1]Klinika za psihijatriju Vrapče, Zagreb, [2]Zdravstveno veleučilište u Zagrebu, Zagreb, [3]Sveučilište u Zagrebu, Fakultet filozofije i religijskih znanosti, Zagreb, Hrvatska

/ [1]*University Psychiatric Hospital Vrapče, Zagreb,* [2]*University of Applied Health Sciences, Zagreb,* [3]*University of Zagreb, Faculty of Philosophy of the Society of Jesus, Zagreb, Croatia*

Palijativni pristup kod osoba s demencijom ne temelji se samo na dijagnozi, već na postizanju najbolje moguće kvalitete života za oboljelu osobu i njezine najbliže. Demencija je kronična progresivna bolest koja uključuje složene potrebe imajući u vidu niz komplikacija koje se često posljedično razvijaju. Oboljele osobe u poodmakloj fazi mogu živjeti godinama, dok pojedini nikada ne dožive lako prepoznatljiv terminalni stadij bolesti. Osim članova obitelji i bliskih prijatelja ključnu ulogu u liječenju zahvaćenih skupina imaju i medicinske sestre. Upravo su one jedan od elementarnih čimbenika u novonastaloj situaciji, kako za osobu s demencijom tako i za, ne manje pogođene, članove obitelji. Glavni cilj palijativnog pristupa medicinske sestre sastoji se, dakle, u korelaciji s oboljelom osobom i njegovom obitelji. Iako učinkovit tretman cerebralne patologije ne postoji, pomoć oboljeloj osobi svakako je moguća. Ona se u prvom redu sastoji u prilagodbi i suočavanju sa stresom. Kako bolest napreduje, demencija znatno utječe i na komunikaciju, stoga je jasna i primjenjiva komunikacija od središnjeg značenja u palijativnom pristupu. Autorice članka upravo zbog toga naglašavaju međusobnu interakciju medicinske sestre i osobe s dijagnosticiranom demencijom, a koja se realizira palijativnom skrbi u cilju poboljšanja kvalitete njihova života.

/ *Palliative care in people with dementia is not only based on diagnosis but on achieving the best possible quality of life for the affected person and their loved ones. Dementia is a chronic progressive disease that involves complex needs, while considering the range of complications that often develop afterwards. Patients at advanced stages can live for years, while some never experience the easily recognizable terminal stage of the disease. Apart from family members and close friends, nurses play a key role in treating affected patients. Nurses are one of the elemental factors in the new situation, both for the person with dementia and for affected family members. The main goal of the nurse's palliative approach, therefore, is to correlate with the diseased person and their family. Although there is no effective treatment for cerebral pathology, it is certainly possible to aid the affected person. First and foremost, it is about adapting and coping with stress. Palliative care is focused on addressing physical symptoms, the most common of which is physical pain and the satisfaction of basic physiological needs, but its secondary role should not be neglected. As the disease progresses, dementia also significantly affects communication, so clear and applicable communication is of major importance to the palliative approach. For this reason, the authors place emphasis on the interaction between the nurse and the person diagnosed with dementia, which is realized through palliative care in order to improve the quality of their lives.*

ADRESA ZA DOPISIVANJE / *CORRESPONDENCE*:
Senka Repovečki, mag. med. techn.
Klinika za psihijatriju Vrapče
Bolnička cesta 32
10090 Zagreb, Hrvatska
E-pošta: srepovecki@gmail.com

KLJUČNE RIJEČI / *KEY WORDS*:
Bol / *Pain*
Demencija / *Dementia*
Komunikacija / *Communication*
Medicinska sestra / *Nurse*
Palijativni pristup / *Palliative Approach*

TO LINK TO THIS ARTICLE: https://doi.org/10.24869/spsih.2019.394

UVOD

U posljednje vrijeme sve se više govori o palijativnoj skrbi ili palijativnoj medicini. Palijativna skrb pretpostavlja sveobuhvatnu skrb pacijenta s naglaskom na psihološkoj, socijalnoj i duhovnoj dimenziji. Generalno je mišljenje kako palijativa započinje onda kada se ljudski život bliži svome kraju. Ipak, sve više se očituje i puno prije. Cilj palijativne skrbi, uz ublažavanje boli, je i podizanje kvalitete života. Prema tome, radi se o grani medicine koja čovjeku pristupa individualno te ga promatra holistički. Samim time jasno je koliko je posao medicinskih sestara i njegovatelja općenito zahtjevan i složen. Uz profesionalnu stručnost traži i puno više. Doživjeti pacijenta i proživjeti ono što on prolazi u datom trenutku nije jednostavan zadatak. U slučaju osoba oboljelih od demencije, on postaje još teži. Naime, osobe s demencijom nisu kategorija pacijenata kojima se bliži skori kraj života. Veliki broj takvih bolesnika proživi dugi životni vijek, a pri tomu, medicinske sestre su njihovi pokretači. Demencija je u današnje vrijeme dosegla vrtoglavi broj oboljelih te iziskuje još detaljniji pristup od već postignutog. Predstavlja ireverzibilno umanjenje ili gubitak kognitivnih sposobnosti s pratećim poteškoćama snalaženja u društvenim, emotivnim i psihičkim dimenzijama života. Ono što je nesumnjivo prati je depresija koju je nemoguće zanemariti i ukloniti. Takvim je osobama, dakle, potrebna posebna posvećenost i stvaranje posebnog ozračja povjerenja prema medicinskim sestrama. One su te koje imaju odgovornost taj isti odnos izgraditi. Složen je to postupak koji kreće od uspostavljanja komunikacije, stvaranja ozračja sigurnosti i utjehe te vjerovanja u njihovu stručnost. Zbog toga je potrebno vrednovati one koji su se odlučili pomoći u izgradnji kvalitetnija života oboljele osobe. Jednako ih je tako potrebno poticati na permanentnu edukaciju i usavršavanje te vrednovati njihovo zalaganje. U mjeri u kojoj je profesionalna stručnost praćena iz-

INTRODUCTION

In recent times, palliative care or palliative medicine has been receiving increased attention. Palliative care assumes comprehensive patient care with an emphasis on the psychological, social, and spiritual dimensions. It is generally believed that palliative care begins when human life is nearing its end. However, it becomes more apparent even before that. The goal of palliative care, along with pain relief, is to raise the quality of life. Therefore, it is a branch of medicine that approaches a person individually and views them holistically. Consequently, it is clear how difficult and complex the work of nurses and caregivers is. Professional expertise is no longer sufficient. Understanding the patient and experiencing what they are going through at any given moment is not an easy task. In the case of people with dementia, it becomes even more severe. People with dementia are not the category of patients nearing the end of their lives. A large number of such people have long lifespans, with nurses being their facilitators. There is a great number of patients suffering from dementia today, and this requires an even more detailed approach than what has already been achieved. Dementia represents an irreversible impairment or loss of cognitive abilities with the attendant difficulties in coping with the social, emotional, and psychological dimensions of life. Dementia is undoubtedly accompanied by depression that cannot be ignored and eliminated. Such persons, therefore, need special commitment and a special atmosphere of trust in nurses. Nurses are the ones who have the responsibility to build that same relationship. It is a complex process that starts from the establishment of communication, creation of an atmosphere of safety and comfort, and belief in their expertise. For this reason, it is necessary to value those who have decided to improve the quality of life for the affected person. It is equally important to encourage them to continue their education and training

građenom duhovnom i afektivnom zrelošću te osobnim zadovoljstvom i cilj palijativne skrbi bit će ostvaren.

KOMUNIKACIJA

Etimologija riječi „komunikacija“ najbolje ukazuje na definiciju i značenje ovoga procesa. Naime, sam termin čine riječi *com*(sa) i *munire* (povezati, izgraditi). Komunikacija je, dakle, proces u kojemu jedan subjekt djeluje s namjerom da ga sugovornik čuje, shvati i djeluje. Ne podrazumijeva isključivu razmjenu informacija već interaktivni proces koji uključuje emotivnu, afektivnu i duhovnu dimenziju pojedinca. Upravo je psihologija otvorila novi pristup definiranju komunikacije smatrajući kako ona pretpostavlja unutarnju dimenziju osobe nužno zahvaćajući i njezin identitet (1). Interakciju s drugima uvelike olakšava kognitivna sposobnost, empatija te umijeće vođenja, održavanja i usmjeravanja interakcije. Primjenjujući do sada rečeno jasno proizlazi kako je komunikacija svojevrsna „razmjena“, odnosno uspostavljanje odnosa. Ako bi proces komunikacije stavili u kontekst govora o bolesnim osobama, nedvojbeno bismo mogli zaključiti kako je komunikacija jedna od metoda njege i pomoći. Razmjena informacija s oboljelom osobom podrazumijeva proces komunikacije te izgradnju odnosa povjerenja pri čemu je nemoguće apsolutno apstrahiranje od emocija. I upravo se u komunikativnoj relaciji s pacijentom sastoji odgovornost osoba koje sudjeluju u procesu liječenja. Ne treba zanemariti ni podatak kako komunikacija pozitivno utječe i na medicinsko osoblje, a što potvrđuju iskustva iz prakse. Jasno je da se komunikacija s pacijentom uvijek može i pogoršati i oslabiti kao što je slučaj osoba oboljelih od demencije, ali to ne znači da time postaje manje važna za oporavak pacijenta. Problemi u komunikaciji s osobama s demencijom često su složeni i slojeviti. Oboljele osobe u velikoj mjeri otežano komuniciraju, a kao prateća okolnost javlja se

and to value their commitment. To the extent that professional expertise is accompanied by a development of spiritual and affective maturity and personal satisfaction, the goal of palliative care will be achieved.

COMMUNICATION

The etymology of the word “communication“ best indicates the definition and significance of this process. The term consists of the words *com* (with) and *munire* (connect, build). Communication, then, is a process in which one subject acts with the intention of being heard, understood, and acted upon by the interlocutor. It does not imply an exclusive exchange of information but an interactive process involving the emotional, affective, and spiritual dimensions of the individual. Psychology opened a new approach to defining communication by stating that it assumes the inner dimension of a person, necessarily encompassing their identity (1). Interaction with others is greatly facilitated by cognitive ability, empathy, and the ability to lead, maintain, and direct interaction. It is clear that communication is a kind of “exchange”, that is, an establishment of a relationship. If we put the communication process in the context of talking about patients, we can undoubtedly conclude that communication is one of the methods of care and assistance. Sharing information with a patient involves the process of communication and building a relationship of trust, whereby absolute lack of emotions is impossible. It is precisely in communication with the patient that the responsibility of the persons participating in the treatment process lies. It should not be neglected that communication has a positive impact on nursing staff, which is evidenced by experience from practice. It is clear that communication with the patient can always be both exacerbated and impaired, as is the case with people with dementia, but this does not mean that it becomes less impor-

i manjak društvenih aktivnosti i depresija (2). Osobe s demencijom mogu se boriti s bezbroj promjena koje utječu na njihove komunikacijske sposobnosti ovisno o stupnju uznapredovalosti bolesti, ali i o osobnoj vještini komunikacije. Demencija može utjecati na način interpretiranja informacija te na (ne)verbalno izražavanje osobe (3). Poteškoće s govorom često su jedan od prvih vidljivih simptoma ljudi s demencijom, a proizlaze iz ograničenosti pamćenja, posebno kratkotrajnog. Osobe s demencijom konstantno zaboravljaju ono što su upravo izgovorile ili učinile, a relativno dobro pamte događaje koji su se dogodili prije više godina ili desetljeća. Vremenom osoba gubi osjećaj za prostornu i vremensku orijentaciju, javljaju se sve veći problemi u pronalaženju adekvatnih riječi te usvajanju novih sadržaja nevezanih uz već usvojene stereotipe (4). Važno je da medicinske sestre razumiju učinak promjena na živote ljudi i razvijaju komunikacijske vještine koje će pružiti sveobuhvatnu skrb osobama s demencijom. Nužan preduvjet uspješne komunikacije svakako je prethodno i permanentno educiranje medicinskog osoblja, u prvom redu medicinskih sestara koje su u najneposrednijem odnosu s dementnim pacijentima. Pri tomu smjeramo na osobnu raspoloživost te aktivno i zainteresirano prisustvovanje različitim formama edukacije te razvijanjem osobne empatije (5). Junaid i Hegde opisuju složenost komunikacije medicinske sestre s osobom s demencijom pojmom „sofisticirane umjetnosti" (6). Veliki doprinos ovoj problematici ostavila je i stručnjakinja za Alzheimerovu bolest i poznata gerontologinja njemačko-američkih korijena, Naomi Feil, zaslužna za osnivanje terapije prihvaćanjem (validacija), koja omogućava bolje razumijevanje verbalnih i neverbalnih poruka oboljele osobe. Validacija je metoda interakcije s ljudima s demencijom u kasnim stadijima bolesti. Prvotni argument kojim opravdava svoju tezu leži u uvjerenju da ljudi s demencijom rade i govore stvari s razlogom, a validacija (vrednovanje) njihovih riječi i djela je

tant for the patient's recovery. Communication problems with people with dementia are often complex. The affected persons have great difficulty in communicating and a lack of social activities and depression also appear as an accompanying issue (2). People with dementia can struggle with various changes that affect their communication skills, depending on the degree of disease progression, but also on their personal communication skills. Dementia can affect the way information is interpreted and the (non) verbal expression of a person (3). Speech difficulties are often one of the first visible symptoms of people with dementia and arise from memory limitations, especially short-term ones. People with dementia constantly forget what they have just said or did, while they remember relatively well the events that happened years or decades ago. Over time, people lose their sense of spatial and temporal orientation, and there are increasing problems in finding adequate words and adopting new content unrelated to already adopted stereotypes (4). It is important for nurses to understand the impact of change on people's lives and develop communication skills that will provide comprehensive care for people with dementia. A precondition for successful communication is certainly prior and continued education of medical staff, primarily nurses who are most directly involved with patients suffering fom dementia. We focus on personal availability and active and interested participation in various forms of education and developing personal empathy (5). Junaid and Hegde describe the complexity of a nurse's communication with a person with dementia using the term of "sophisticated art" (6). A major contributor to this issue was Alzheimer's disease expert and well-known gerontologist with German-American roots, Naomi Feil, who was responsible for founding acceptance therapy (validation), which provides a better understanding of the patient's verbal and non-verbal messages. Validation is a method of interacting with people

način ohrabrivanja osobe da održi otvorenu komunikaciju s ostatkom svijeta. Drugi temeljni princip validacije navodi da osobe s demencijom ne treba pokušavati mijenjati. Način validiranja osobe koja živi s demencijom sastoji se u razumijevanju djelatnih čina i izgovorenoga te, na posljetku, prihvaćanja takvoga tipa ponašanje. Korištenje validacijskih metoda interakcije čini premisu za prevenciju kasnih stadija bolesti, zaštite od daljnjeg mentalnog gašenja i zadržavanje kognitivnih funkcija što je više moguće aktivnima. Validacija ohrabruje osobu za izgradnjom povjerenja prema povjerenoj medicinskoj sestri. Slušanje s razumijevanjem, verbalizacija frustracija, brige i strahova može neutralizirati negativne emocije što za posljedicu ima bolje kognitivno funkcioniranju i ponašanje. Pozitivan efekt intervenata usmjerenih na razvoj komunikacije (validacija, kognitivna stimulacija i dr.) najveći učinak postiže u tzv. *single-task* intervencijama, razgovoru „jedan na jedan" i tzv. životnim osvrtima. Upravo se životni osvrt ističe kao poseban tip intervencije budući da u njemu pacijent prepoznaje smisao i svrhu vlastita postojanja (7). Komunikacija, u spomenutom kontekstu individualni je pristup oboljeloj osobi te je kao takva preduvjet kvalitetnije skrbi i liječenja. Uspješna komunikacija ujedno je i znak poštovanja dostojanstva osobe s demencijom.

BOL I DEMENCIJA

Palijativna skrb za svoj primarni cilj ima rješavanje tjelesnih i fizioloških simptoma među kojima je najčešća bol. Bol je univerzalna kategorija, različito doživljena, te je kao takva subjektivno iskustvo. Prema tome, i u ovom segmentu palijativna skrb kreće se na području osobnoga i individualnog. Za razliku od kurativne medicine, koja za cilj ima liječiti pacijenta, palijativna medicina za cilj ima smanjenje boli. Pri tome apstrahira od isključivo fizičkoga i osobu promatra holistički. Kod demencije

with dementia in late stages of the disease. The first argument she uses to justify her thesis lies in the belief that people with dementia do and say things for a reason, and validation (appreciation) of their words and actions is a way of encouraging a person to maintain open communication with the rest of the world. Another basic principle of validation states that we should not attempt to change people with dementia. Validating a person who lives with dementia consists of understanding their words and actions, and, finally, of accepting that type of behaviour. The use of validation interaction methods represents prevention of late-stage illnesses, protection against further mental impairment, and retention of active cognitive functions. Validation encourages the person to build trust towards the nurse. Attentive listening and verbalizing frustration, worry, and fear can counteract negative emotions, resulting in better cognitive functioning and behaviour. The positive effect of interventions aimed at the development of communication (validation, cognitive stimulation, etc.) has the greatest effect on so-called single-task interventions, one-on-one conversations, and so-called life reviews. Life review stands out as a special type of intervention since the patient recognizes in it the meaning and purpose of their existence (7). Communication, in the abovementioned context, is an individual approach to the patient and as such is a precondition for better quality care and treatment. Successful communication is also a sign of respect for the dignity of a person with dementia.

PAIN AND DEMENTIA

The primary goal of palliative care is to solve physical and physiological symptoms, the most common of which is a pain. Pain is a universal category, differently experienced, and as such represents a subjective experience. Accordingly, palliative care functions in the area of the

raspodjela neuropatoloških promjena dovodi do većeg utjecaja na središnji sustav boli. Kliničke posljedice za osobu s demencijom su nepromijenjeni prag boli, ali i veća tolerancija na bol. Osoba s težim kognitivnim oštećenjima ima manje uzrokovanih poremećaja ponašanja povezanih s boli u odnosu na osobu s lakšim ili umjerenim kognitivnim oštećenjima (8,9). Točna procjena boli glavni je preduvjet za adekvatno liječenje, procjenu učinka, ali i potencijalno štetnih učinaka analgetskih lijekova. Kod osoba s demencijom posebno je izazovna zbog gubitka komunikacijskih sposobnosti svojstvenih simptomatologiji stanja, te ograničava subjektivno izražavanje boli. Pri procjeni medicinska sestra treba definirati čimbenike uzroka boli, koji mogu biti fizičke i psihičke prirode ili interakcija obiju. Različiti oblici boli predstavljaju različite izazove. Bol koja se odnosi na unutarnje organe posebno je zahtjevna za dijagnosticiranje u usporedbi s bolovima povezanim s mišićno-koštanim sustavom, koji se mogu prepoznati po pokretima (10). Akutnu bol, kao npr. posljedicu pada, lakše je procijeniti od kronične boli, koja se često prikriva ograničenim pokretom zbog izbjegavanja boli. Oko 60-80 % osoba s demencijom redovito doživljava bol, najčešće povezanu s mišićno-koštanim, gastrointestinalnim i srčanim organima (11). Davne 1984. godine Svjetska zdravstvena organizacija donijela je smjernice za terapiju boli, tzv. trostupanjsku anglosaksonsku tablicu prema kojoj se intenzitet boli određuje numeričkom ljestvicom (12). Uz spomenutu numeričku ljestvicu najčešće su korištene *VisualAnalog Scale* (VAS) te *Scale of Pains* (FPS). Navedene ljestvice koriste se u ranijem stadiju demencije, kada osoba verbalnom komunikacijom može opisati jačinu i lokalizaciju boli. U kasnijem stadiju bolesti osoba često više nije u mogućnosti koristiti introspekciju kako bi stekla znanje o boli, te nije u stanju razumjeti pitanja vezana uz procjenu boli. U tom slučaju samoprocjena nije moguća te obično njegovatelj ili medicinska sestra koji

personal and the individual. Unlike curative medicine, which aims to treat the patient, palliative medicine aims to reduce pain. In doing so, it abstracts from the purely physical and views the person holistically. In dementia, the distribution of neuropathological changes leads to a greater impact on the central pain system. The clinical consequences for a person with dementia are unchanged pain threshold but also greater tolerance for pain. A person with severe cognitive impairment has fewer causes of pain-related behavioural disorders than a person with mild or moderate cognitive impairment (8,9). Accurate pain assessment is a major prerequisite for adequate treatment, evaluation of the effect, but also the potentially harmful effects of analgesic drugs. In people with dementia, it is particularly challenging because of the loss of communication skills inherent in the symptomatology of the condition, which limits the subjective expression of pain. During assessment, the nurse should define the causes of pain, which may be of a physical or psychological nature, or an interaction of both. Different forms of pain present different challenges. Pain related to the internal organs is especially challenging to diagnose in comparison with pain associated with the musculoskeletal system, which can be recognized through movement (10). Acute pain, such as the consequence of a fall, is easier to assess than chronic pain, which is often masked by the limitation of movement for the purpose of avoiding pain. Approximately 60-80% of people with dementia regularly experience pain, and it is most commonly associated with the musculoskeletal, gastrointestinal, and cardiac organs (11). In 1984, the World Health Organization issued guidelines for pain therapy, the so-called three-stage Anglo-Saxon table according to which pain intensity is determined using a numerical scale (12). In addition to the numerical scale mentioned above, the most commonly used scales are the Visual Analog Scale (VAS) and the Scale of Pains (FPS). These scales are used at an earlier stage of dementia when a per-

poznaju uobičajeno ponašanje oboljele osobe bivaju uključeni u procjenu boli. Međutim, treba napomenuti da se uvijek nastoji dobiti neka vrsta samoprocjene unutar ograničenja pojedinih simptoma i stanja. Temeljito promatranje ponašanja i sveobuhvatan pristup otkriva znakove koji upućuju na bol ili nelagodu. Bol za rezultat može imati poremećaj ciklusa spavanja i obrazaca aktivnosti, smanjenje tjelesne funkcije, a nerijetko je rezultat produženi boravak u bolnici. Medicinska sestra treba obratiti pozornost na govor tijela i izraze lica, intonaciju i boju glasa, promjene u ponašanju, međuljudskim interakcijama, emocionalnim i psihičkim promjenama, te na promjene u dnevnim aktivnostima. Sve su to indikatori da je bol nastupila ili se intenzivirala. Kako liječenje fizičke boli samo po sebi nije dostatno, razumijevanje potreba osoba s demencijom smanjuje njihovo nezadovoljstvo i olakšava nastalo trpljenje.

POREMEĆAJ PREHRAMBENOG OBRASCA KOD OSOBA S DEMENCIJOM

Veliki broj istraživanja koja za objekt imaju prehranu i osobe s demencijom u prvom redu zahvaćaju etička pitanja, odnosno, umjetno hranjenje oboljelih osoba u terminalnoj fazi bolesti. U praksi, problemi započinju mnogo ranije. Rizik loše ishrane oboljelih osoba značajno je porastao, prema procjenama, od 15 % na 50 % slučajeva (13). Utjecaj koji u preveniranju ovoga elementa imaju osobe koje rade u palijativnoj skrbi vrlo je značajan (14). Kod osoba s demencijom, koje se zbog kognitivnih i komunikacijskih poteškoća ne mogu zauzeti za sebe, obrok je često beznačajan događaj lišen dostojanstva. Nužnu pozornost potrebno je obratiti ne samo vrsti ishrane već i načinu na koji se ono provodi. Osoba u ranom stadiju bolesti u okvirima optimalne prehrane funkcionira relativno dobro uz minimalnu pomoć.

son can describe the severity and localization of pain through verbal communication. In the later stages of the illness, the person is often no longer able to use introspection to gain knowledge of pain and is unable to understand the issues associated with pain assessment. In this case, self-assessment is not possible and the caregiver or nurse who knows the usual behaviour of the affected person is usually involved in pain assessment. However, it should be noted that some sort of self-assessment should be achieved within the limitations of particular symptoms and conditions. A thorough observation of the behaviour and a comprehensive approach reveal signs that indicate pain or discomfort. Pain can result in disruption of sleep cycles and patterns of activity, decreased physical function, and the result is often prolonged hospital stay. Nurses should pay attention to body language and facial expressions, intonation and tone of voice, changes in behaviour, interpersonal interactions, emotional and mental changes, and changes in daily activities. All these are indications that pain has occurred or intensified.

EATING PATTERN DISORDER IN PERSONS WITH DEMENTIA

A great deal of research on the subject of nutrition and people with dementia primarily addresses ethical issues such as artificial feeding of patients in the terminal phase of the disease. In practice, problems start much earlier. The risk of poor nutrition for the patient is estimated to have increased significantly from 15 to 50% of cases (13). The impact which people working in palliative care have on preventing this is of great significance (14). For people with dementia who cannot take care of themselves due to cognitive and communication difficulties, eating is often an insignificant event devoid of dignity. Attention should be paid not only to the type of diet but also to how it is carried out. A person in the early stage of the disease, in the

Ima sposobnost opisati simptome koji otežavaju prehranu, kao što su stomatološki problemi, bolovi u abdomenu ili pak poteškoće s gutanjem. Navedeni simptomi, uključujući i depresiju koja se javlja u navedenom stadiju, kod nekih osoba rezultiraju smanjenim unosom hrane te gubitkom na tjelesnoj težini (15). U srednjem stadiju bolesti najčešći rani znak problema povezanih s prehranom je nemogućnost korištenja pribora za jelo. Osoba gubi sposobnost stavljanja hrane u usta zbog toga što zaboravlja kako koristiti pribor ili što treba učiniti s hranom. Oboljela osoba često ne može dovoljno dugo biti psihomotorno mirna kako bi završila započeti obrok. Ako su prisutni psihotični simptomi, osoba odbija otvoriti usta ili pak pljuje hranu u strahu da će se otrovati. Budući da osoba s demencijom dosta luta, u stalnom je pokretu, potrebna joj je visokokalorična prehrana. Kako bolest napreduje, vremenom se javljaju poteškoće sa žvakanjem i gutanjem hrane. Jednako tako dolazi do gubitka na tjelesnoj težini što rezultira mišićnom slabošću, padovima i drugim komplikacijama koje smanjuju kvalitetu života (16). U završnom stadiju bolesti osoba gubi nagon za hranjenjem, zaboravlja kako žvakati i progutati hranu, te postoji visoki rizik za aspiraciju ili mehaničku opstrukciju gornjih dišnih putova. Postoje kontroverze vezane uz procjenu gutanja i uvođenje nazogastrične sonde kod osobe u završnom stadiju bolesti, ali ipak njihova vrijednost u produžavanju života nije dokazana (16). Jedna od metoda rješavanja ovoga pitanja svakako je personalizirani plan ishrane oboljele osobe, a koji nudi model *GenteCare*. Ovaj model pretpostavlja organiziranu nutricionističku ekipu te ocrtava metodološke korake koje je nužno slijediti kako bismo došli do cilja, a to je kompletan osobni plan ishrane (17). Vrednovanje i izbor odgovarajuće strategije učinkovitog interveniranja vrlo je složeno. Analiziranje poteškoća i posljedica slučajeva iz prakse zasigurno može biti nit vodilja za razvijanje prakse u kojoj će centralnu ulogu imati osoba i koja

context of optimal nutrition, functions relatively well with minimal assistance. They have the ability to describe symptoms that make eating difficult, such as dental problems, abdominal pain, or difficulty swallowing. These symptoms, including depression that occurs at this stage, result in decreased food intake and weight loss in some people (15). In the middle stages of the disease, the most common early sign of eating problems is the inability to use cutlery. A person loses the ability to put food in their mouth because they forget how to use the utensils or what to do with the food. Often, the patient cannot remain physically calm long enough to finish their meal. If psychotic symptoms are present, the person refuses to open their mouth or spits food in fear of being poisoned. Because a person with dementia is wandering a lot, they are constantly on the move and need a high-calorie diet. As the disease progresses, problems with chewing and swallowing food appear over time. Likewise, weight loss occurs, resulting in muscle weakness, falls, and other complications that impair quality of life (16). In the final stages of illness, the person loses the instinct to eat, forgets how to chew and swallow food, and there is a high risk of aspiration or mechanical obstruction of the upper respiratory tract. There are certain issues regarding the assessment of ingestion and the introduction of a nasogastric tube in a person in the final stages of the disease, but their value in prolonging life has not been proven (16). One method of addressing this is certainly a personalized diet plan for the patient, which is provided by the GenteCare model. This model assumes an organized nutrition team and outlines the methodological steps that must be followed to reach the goal, which is a complete personal diet plan (17). Evaluating and selecting the correct effective intervention strategy is very complex. Analysing the difficulties and consequences of cases from practice can certainly be the guiding principle for developing a practice in which the person will play a central role and

će biti usmjerena zadovoljenju potreba u svim kompleksnostima koji ju prate.

POMOĆ ČLANOVIMA OBITELJI (NJEGOVATELJIMA)

Iako su članovi obitelji ključni element palijativne skrbi, njihova važnost vrlo često je marginalizirana. Jednako tako, ne samo na našim područjima već i šire, efektivna učinkovitost i uloga koju one imaju nije ispravno shvaćena. Zahtjevnost njegovanja može biti porazna pogotovo ako osoba ima osjećaj da nema nikakvu kontrolu nad situacijom u kojoj se nalazi. Pružanje skrbi za obitelj u potrebi je stoljetni čin dobrote, ljubavi i odanosti. Ipak, pomoć i njega oboljelog člana može uzeti danak, ako se ne dobije odgovarajuća podrška (18). Njegovateljstvo uključuje mnoge stresore kao što su promjena obiteljske dinamike i socijalnog funkcioniranja te financijski pritisak. Nagrade njegovateljima, ako uopće i dolaze, su nematerijalne i vrlo često neproporcionalne uloženom trudu. Stalna briga oko bolesnog člana, nagomilavanje stresa i frustracija dovodi do pojavnosti anksiozno-depresivnih simptoma kod članova obitelji koji njeguju oboljelu osobu (19). Njegovateljstvo je posao, a odmor je nešto što je njegovatelj zaradio, bio on stručna osoba ili član obitelji. Važno je uputiti njegovatelja prihvaćanju pomoći ljudi oko sebe te racionaliziranju vremena kojega može posvetiti oboljeloj osobi. U 72 % slučajeva skrb i njegu za oboljelog člana obitelji pružaju žene (19). U današnje vrijeme govorimo o ženskom licu demencije, prevalencija i incidencija znatno je veća kod žena nego kod muškaraca. Žene imaju očekivano dulji životni vijek u odnosu na muškarce, te se prevalencija povećava i s dobi osobe (20). Skrbnički stres prisutniji je kod žena jer one puno emotivnije doživljavaju promjene voljenih o kojima skrbe (21). Sraz emocija može izazvati obiteljske sukobe, što opravdava uskraćivanje pomoći potrebitom članu obitelji, ako je on u prošlosti bio odsutan,

will be geared towards meeting the needs in all the complexities that they experience.

ASSISTANCE TO FAMILY MEMBERS (CAREGIVERS)

Although family members are a key element of palliative care, their importance is very often marginalized. Also, not only in our areas but beyond them, the effectiveness and the role they play is not properly understood. The complexity of providing care can be overwhelming, especially if the person feels they have no control over the situation they are in. Providing care for a family is a centuries-old act of kindness, love, and loyalty. However, the assistance and care for a sick member can be a burden unless adequate support is obtained (18). Nursing involves many stressors such as changing family dynamics and social functioning and financial pressure. The rewards, if any, are immaterial and often disproportionate to the effort. Constant care for a sick member and the rise of stress and frustration, leads to the onset of symptoms of anxiety and depression in family members caring for a sick person (19). Nursing is a job, and a vacation is something a caregiver has earned, whether they are an expert or a family member. It is important to instruct the caregiver to accept the help of the people around them and to rationalize the time they can devote to the affected person. In 72% of cases, care for a sick family member is provided by women (19). Nowadays there is talk about the female face of dementia since the prevalence and incidence are much higher in women than in men. Women have a longer life expectancy than men, and the prevalence also increases with the age of the person (20). Caregiver stress is more prevalent in women because they experience a much more emotional change in the loved ones they care for (21). The collision of emotions can cause family conflicts, which justifies denying help to a family member if they have been absent, cold, selfish,

hladan, sebičan ili nasilan. Zato, kada se razmatraju potrebe njegovatelja osobe s demencijom, moraju se sagledati svi odnosi šire obitelji, uključujući i obiteljsku ulogu osobe prije nastupa bolesti.

or violent in the past. Therefore, when considering the needs of the caregiver of a person with dementia, all relationships of the wider family, including the family role of the person before the onset of the illness, must be considered.

ZAKLJUČAK

Iako je palijativna skrb primarno orijentirana rješavanju tjelesnih simptoma, među kojima je najčešća fizička bol i zadovoljenje osnovnih fizioloških potreba, ne treba zanemariti ni njezinu sekundarnu ulogu. Naime, palijativna skrb fokusirana je stvaranju kvalitetnih okvira življenja svakodnevice u situaciji kada su sve ostale klasične metode liječenja iscrpljene. Temelji se na empatiji, komunikaciji s oboljelom osobom, poštivanju i očuvanju njegova dostojanstva. U konkretnom slučaju, osoba s demencijom, ona postaje još izraženija. Više no fizičkoj, oboljele osobe pogođene su psihičko-emotivnom boli, te su medicinske sestre faktor koji utječe na ublaženje takvoga stanja. Zbog toga je nužno osvijestiti ulogu sestara u palijativnoj skrbi osoba s demencijom. Nekoliko je glavnih točaka koje karakteriziraju ulogu sestre. Prva je, nedvojbeno, komunikacija odnosno prvi susret s pacijentom i stvaranje odnosa povjerenja. Nužno je što većim intenzitetom apelirati na komunikaciju kao „sredstvu liječenja". Iako se, nerijetko, komunikacija s oboljelim osobama smatra besmislenom, njezina prisutnost u palijativnoj skrbi neophodna je te nije podložna nikakvim ograničenjima. Nadalje, uloga koju sestre imaju u ublažavanju fizičke boli te ostalih fizioloških potreba također nije zanemariva. Budući da palijativna skrb polazi od holističkog pristupa individui, nužna je osobna angažiranost i edukacija sestara u cilju što kvalitetnija pristupa osobama s demencijom. Kvaliteta djelovanja medicinskih proporcionalna je kvaliteti života oboljelih osoba. Ona je, ujedno i odraz poštivanja njihova dostojanstva u svakoj fazi bolesti.

CONCLUSION

Although palliative care is primarily focused on addressing physical symptoms, the most common of which is physical pain and the satisfaction of basic physiological needs, its secondary role should not be neglected. Palliative care is focused on creating quality frameworks of living every day in a situation where all other classic treatments are exhausted. It is based on empathy, communication with the patient, respect, and preservation of their dignity. In the case of providing care for a person with dementia, it becomes even more pronounced. Such patients are affected by psycho-emotional pain more than physical pain, and nurses are a factor that contributes to the alleviation of this condition. For this reason, it is necessary to raise awareness of the role of nurses in the palliative care of people with dementia. There are several main points that characterize the role of the nurse. The first is, undoubtedly, communication, or the first meeting with a patient and creating a relationship of trust. It is important to emphasise as much as possible that communication is a "treatment". Although communication with patients is often considered pointless, its presence in palliative care is necessary and is not subject to any restrictions. Furthermore, the role nurses play in alleviating physical pain and other physiological needs is also far from negligible. Since palliative care is based on a holistic approach to the individual, personal involvement and education of nurses is needed in order to provide better access to people with dementia. The quality of medical staff activity is proportional to the quality of life of the patient. It is also a reflection of respect for their dignity at every stage of illness.

LITERATURA/*REFERENCES*

1. Anolli L. Fondamenti di psicologiadellacomunicazione. Bologna, 2006, str. 21-2.
2. Potkins D, Myint P, Bannister C, Tadros G, Chithramohan R, Swann A i sur. Language impairment in dementia: impact on symptoms and care needs in residential homes. Int J Geriatr Psychiatry 2003; 18: 1002-106.
3. Mimica N, Kalinić D. Art therapy may be benefitial for reducing stress-related behaviours in people with dementia - case report. Psychiatr Danub 2011; 23: 125-8.
4. Mimica N. Komunikacija s osobom oboljelom od demencije. Medix 2011; 17(92 - Suppl 1): 56-8.
5. Eggenberger E, Heimerl K, Bennett M. Communication skills training in dementia care: a systematic review of effectiveness, training content, and didactic methods in different care settings. Int Psychogeriatr 2013; 25(3): 345-58.
6. Junaid O, Hegde S. Supportive psychotherapy in dementia. Br J Psych Adv 2007; 13(1): 17-23.
7. Vasse E, Vernooij-Dasse M, Spijker A, OldeRikkert M, Koopmans R. A systematic review of communication strategies for people with dementia in residential and nursing homes. Int Psychogeriatr 2010; 22(2): 198.
8. Monroe T, Gore JC, Chen LM, Mion LC, Cowan RL. Pain in people with Alzheimer disease: potential applications for psychophysical and neurophysiological research. J Geriatr Psychiatry Neurol 2012; 25(4): 240-55.
9. Monroe T, Carter M, Feldt K, Tolley B, Cowan RL. Assessing advanced cancer pain in older adults with dementia at the end-of-life. J AdvNurs 2012; 68(9): 2070-8.
10. Husebo BS, Strand LI, Moe-Nilssen R, Husebo SB, Ljunggren AE. Pain in older persons with severe dementia. Psychometric properties of the Mobilization-Observation-Behaviour-Intensity-Dementia (MOBID-2) Pain Scale in a clinical setting. Scand J Caring Sci2010; 24(2): 380-91.
11. Lobbezoo F, Weijenberg RA, Scherder EJ. Topical review: orofacial pain in dementia patients. A diagnostic challenge. J Orofac Pain 2011; 25(1): 6-14.
12. Braš M, Đorđević V. Suvremene spoznaje iz palijativne medicine: uloga ljekarnika u palijativnoj skrbi: Zagreb: Medicinska naklada, 2012.
13. Ogawa S. Nutritional Management of older adults with cognitive decline and dementia. Geriatr Gerontol Int 2014;(Suppl. 2): 17-22.
14. Barrat JA. Ensuring good nutrition in dementia care. Rev Clin Gerontol 2014; 14: 247-51.
15. Amella EJ. Eating and feeding issues in older adults with dementia. U: Boltz M (ur.) Best practices in nursing care to older adults with dementia, New York: New York University College of Nursing, 2007.
16. Amella EJ. Feeding and hydration issues for older adults with dementia. U: Mezey M, Capezuti E, Fulmer T (ur.) Care of older adults nursing clinics of North America, New York, New York University College of Nursing, 2004; 39: 607-23.
17. Jones M. Gentlecare. Un modellopositivo di assistenza per l'Alzheimer. Edizioneitaliana a cura di Luisa Bartorelli. Roma: Carocciditore, 2005.
18. Mimica N, Dajčić M. Alzheimerovabolest. U: Šostar Z, Fortuna V (ur.). Vodič za starije građane grada Zagreba. Zagreb: Grad Zagreb – Gradski ured za zdravstvo, rad, socijalnu zaštitu i branitelje, 2009.
19. Kovačić Z, Repovečki S. Učestalost anksioznih i depresivnih simptoma kod obiteljskih i profesionalnih njegovatelja koji skrbe o oboljelima od Alzheimerovebolesti. Soc psihijat 2016; 44: 93-104.
20. Uzun S, Todorić Laidlaw I, Kušan Jukić M, Kozumplik O, Kalinić D, Pivac N i sur. Od demencije češće boluju žene. Soc psihijat 2018; 46: 58-76.
21. Mahoney R. Anxiety and depression in family caregivers of people with Alzheimer's disease: the LASER-AD study. Am J Geriatr Psychiatry 2005; 13: 795-801.

Opterećenje njegovatelja osoba oboljelih od Alzheimerove bolesti

/ Difficulties of Caregivers of Individuals Suffering from Alzheimer's Disease

Jelena Sušac[1], Ivana Todorić Laidlaw[1], Miroslav Herceg[1,2], Andrea Jambrošić Sakoman[1], Krešimir Puljić[1], Ninoslav Mimica[1,2]

[1]Klinika za psihijatriju Vrapče, [2] Sveučilište u Zagrebu, Medicinski fakultet, Zagreb, Hrvatska

/ [1]*University Psychiatric Hospital Vrapče,* [2]*University of Zagreb, School of Medicine, Zagreb, Croatia*

U današnjem društvu postoji jasan trend porasta broja osoba starije životne dobi pa time i sve veća statistička značajnost broja osoba oboljelih od Alzheimerove bolesti što generira povećanu potrebu adekvatne skrbi za oboljele. Uz formalne oblike skrbi (pružene od profesionalaca iz sustava zdravstvene i socijalne skrbi), neformalna njega značajan je resurs u pružanju skrbi osobama s demencijom. Neformalni njegovatelji su pojedinci koji se dobrovoljno brinu za člana obitelji ili prijatelja koji se suočava sa bolešću, invaliditetom ili bilo kojim drugim stanjem koje zahtijeva posebnu pažnju. S obzirom na tijek i duljinu trajanja Alzheimerove bolesti i sama skrb za oboljelog je dugotrajna i iscrpljuća, a uključuje sve razine funkcioranja njegovatelja pa ju je potrebno sagledavati u kontekstu kako ekonomskog, tako i emocionalnog, mentalnog i fizičkog stanja njegovatelja. Iako može imati i neke blagotvorne aspekte, skrb za oboljeloga je obično vrlo stresna i može u značajnoj mjesti utjecati na zdravlje i dobrobit njegovatelja te je stoga potrebno razmotriti probleme i opterećenja s kojima se susreću njegovatelji osoba oboljelih od Alzheimerove bolesti.

/ In modern society, the number of elderly individuals is higher and so is the statistical significance of people living with Alzheimer's disease. This trend results in a higher demand for adequate care for such patients. Along with formal care (provided by social workers and other health care professionals), informal care has become a significant resource in the nursing of individuals with dementia. Informal caregivers are individuals who voluntarily attend to the needs of a family mwember or a frend living with illness, handicap, or any other condition that requires special needs. Considering the course and duration of Alzheimer's disease, the nursing of patients can also be lengthy and exhausting. Moreover, all aspects of a caregiver's job must be taken into consideration starting the mental, emotional, and physical health to nursing expences. Although there are positive aspects, nursing an individual with dementia is extremely stressful and significantly affect the health and wellbeing of the caregiver, and therefore it is necessary to take into consideration all difficulties and problems caregivers of people living with Alzheimer's disease may encounter.

ADRESA ZA DOPISIVANJE / *CORRESPONDENCE*:
Jelena Sušac, dr. med.
Klinika za psihijatriju Vrapče
Bolnička cesta 32
HR-10090 Zagreb, Hrvatska
E-pošta: jelena.susac@gmail.com

KLJUČNE RIJEČI / *KEY WORDS*:
Alzheimerova bolest / *Alzheimer's Disease*
Njegovatelj / *Caregiver*
Opterećenje / *Burden*

TO LINK TO THIS ARTICLE: https://doi.org/10.24869/spsih.2019.405

UVOD

Alzheimerova bolest (AB) je neurodegenerativna, progresivna i neizlječiva bolest heterogene etiologije koju klinički prominentno obilježava deterioracija kognitivno-mnestičkih funkcija, a potom i gubitak sposobnosti izvođenja svakodnevnih aktivnosti te ovisnost o tuđoj njezi i pomoći. Sindrom demencije ima visoku godišnju incidenciju u Europi te se procjenjuje da premašuje incidenciju moždanog udara, dijabetesa i raka dojke (1). Svake godine se bilježi 7,7 milijuna novih slučajeva demencije u svijetu ili slikovito – jedan novi slučaj svake četiri sekunde (1). Epidemiološkim studijama je pokazano da svjetska prevalencija demencije iznosi oko 6,1 % u populaciji starijoj od 65 godina (0,5 % svjetske populacije) od čega je 59 % žena (2). Prema Europskoj federaciji neuroloških društava, demecija zahvaća 5,4 % osoba starijih od 65 godina te njena prevalencija raste s povećanjem dobi (2). AB je sveukupno najčešći (60-70 %) oblik demencije, a nakon dobi od 65 godina AB je uzrokom demencije u više od 80 % dementnih bolesnika. Smatra se da od demencije boluje više od 85 000 osoba (3). Također, smatra se da na području glavnog grada Hrvatske, Zagreba, ima više od 15 000 osoba oboljelih od demencije (3). Neurodegenerativne bolesti koje dovode do demencije po zdravstvenim (morbiditet i mortalitet su im odmah iza kardiovaskularnih i malignih tumorskih bolesti), socijalnim (onemogućavaju kvalitetan život oboljele osobe u zajednici) i ekonomskim pokazateljima (troškovi uzdržavanja i liječenja oboljelih od AB u zapadnom će svijetu uskoro biti jednaki kao zajednički troškovi za kardiovaskularne bolesti, rak i moždani udar zajedno) imaju danas ogromno značenje. Zbog porasta udjela starije populacije u budućnosti se očekuje daljnje povećanje broja oboljelih (4,5).

Uz formalnu skrb za pacijenta neformalna njega značajan je resurs u pružanju skrbi osobama s demencijom (4-6). Neformalni njegovatelji

INTRODUCTION

Alzheimer's disease (AD) is a neurodegenerative, progressive, and incurable disease of heterogeneous etiology, clinically prominently characterized by a deterioration of cognitive-mnesic functions, and later by the loss of ability to carry out daily activities and by being dependent on other people's nursing and help. Dementia is a syndrome with a high yearly incidence in Europe, and it has been estimated that it is even higher than stroke, diabetes, and breast cancer (1). Every year around 7.7 million new cases of dementia are recorded worldwide, which means one new case every four seconds, on average (1).

Epidemiological studies have found that the prevalence of dementia is 6.1% in the average population above 65 years of age (0.5% of the world population), 59% of whom are women (2). According to the European Federation of Neurological Societies, dementia affects 5.4% of the population of 65 years of age and its prevalence grows along with age (2). AD is overall the most frequent form of dementia (60–70%), whereas in the population of above 65 years of age AD is regarded as the cause of dementia in 80% of cases. It has been recorded that over 85.000 people suffer from dementia (3). Also, in the area of Zagreb, the capital city of Croatia, there are 15.000 people suffering from dementia (3). Neurodegenerative diseases that lead to dementia according to health (morbidity and mortality are immediately behind cardiovascular and malignant tumours), social (they prevent quality lifestyle of patients within their community), and economic parameters (support and medical expenses for AD patients in the western world will soon be equal to expenses of cardiovascular diseases, cancer, and stroke together) all have an enormous significance. Due to the growing percentage of the older population, we can expect an even higher number of patients in the future (4,5).

Along with formal care, informal care has become a significant resource in the nursing of

su pojedinci koji se dobrovoljno brinu za člana obitelji ili prijatelja koji se suočava s bolešću, invaliditetom ili bilo kojim drugim stanjem koje zahtijeva posebnu pažnju (7). Osobe oboljele od Alzheimerove bolesti tijekom same bolesti postaju u sve većem opsegu ovisne o okolini u svim aspektima života tako da neformalni njegovatelj zauzima ključnu ulogu u brizi za oboljelog. Samim tim se povećava mogućnost ekonomskog, emocionalnog, mentalnog i fizičkog opterećenja njegovatelja što generalno ostaje neprepoznato od strane države, tj. sustava socijalne i zdravstvene skrbi.

EKONOMSKA OPTEREĆENJA NJEGOVATELJA

Istraživanje koje su objavili Bakker i sur. 2013. ukazuje da je omjer neformalne i formalne zdravstvene skrbi za osobe s demencijom 3:1 (8), dok prema Gustavssonu i sur. troškovi neformalne njege čine 82 – 86 % ukupnih troškova njege za osobe s demencijom (9,10). Prema Gustavssonu i sur. godišnji trošak njege po pacijentu je 7820 eura, od čega 54 % čine troškovi neformalne njege (9,10). U troškove neformalne skrbi spadaju lijekovi (porazna je činjenica da u Republici Hrvatskoj ne postoji nijedan antidementiv na osnovnoj listi lijekova Hrvatskog zavoda za zdravsveno osiguranje), pomoćna sredstva za njegu oboljeloga (npr. pelene za odrasle, specijalizirani medicinski kreveti i dekubitalni madraci, druga medicinska pomagala i sl.), dodatne prehrambene potrebe oboljeloga, prijevoz (mimo onog plaćenog preko osiguanja), izvaninstitucijska stručna pomoć medicinskog osoblja u kući (mreža patronažne skrbi u nekim slučajevima nije dostatna), održavanje kućanstva, ali i njegovateljevi izostanci s radnog mjesta, smanjena učinkovitost na radnom mjestu pa i potpuno napuštanje radnog mjesta (davanje otkaza) zbog skrbi za oboljeloga. S obzirom na starenje stanovništa, ali i aktualne sociološke

individuals suffering from dementia (4-6). Informal caregivers are individuals who voluntarily attend to the needs of a family member or a friend suffering from an illness, handicap, or any other condition that requires special needs (7). Throughout the duration of their illness, persons affected by Alzheimer's disease become more and more heavily reliant on their environment in all aspects of their life. Therefore, informal caregivers assume a fundamental role in the nursing of patients. Consequently, there is an increase in the risk of economic, emotional, mental, and physical distress for caregivers, who generally remain unrecognized by authorities such as social security and health service.

CAREGIVERS' ECONOMIC DIFFICULTIES

According to a paper by Bakker et al. from 2013, there is a 3 to 1 ratio between informal and formal nursing of persons suffering from dementia (8). Moreover, Gustavsson et al. found that the costs of informal nursing of patients with dementia amount up to 82–86% of the overall nursing expenses (9,10). According to Gustavsson et al., yearly nursing expenses per patient amount up to 7.820 EUR, 54% of which are informal nursing expenses (9,10). Informal nursing costs include medications (it is a frustrating that there are no antidementives on the basic medication list issued by the Croatian Health Insurance Fund), medical and general equipment (adult diapers, specially designed medical beds and anti-decubitus mattresses, or other essential equipment), additional nutritional needs of patients, transportation (other than what is covered by insurance), professional medical help at home (the patronage network is in some cases insufficient), household maintenance; but also it is important to take into account the caregivers' frequent absences from work, reduction of efficiency at work or even job loss or quitting in order to be at the patient's disposal at all

trendove (izostanak klasičnog obiteljskog nukleusa, poglavito u urbanim područjima), broj kreveta u državnim/gradskim domovima za starije i nemoćne je daleko ispod potreba stanovništva te se pribjegava smještaju oboljeloga u privatne domove (pogotovo u terminalnoj fazi bolesti) što je također značajno financijsko opterećenje.

EMOCIONALNO I MENTALNO OPTEREĆENJE NJEGOVATELJA

Briga za osobe oboljele od Alzheimerove bolesti je dugotrajna i emocionalno vrlo iscrpljujuća tako da i sami njegovatelji osjećaju patnju prolazeći kroz sve zahtjeve koji su stavljeni pred njih kao i sam proces bolesti koja je još uvijek neizlječiva i završava smrtnim ishodom. U usporedbi s njegovateljima bolesnika koji boluju od drugih kroničnih bolesti, njegovatelji bolesnika s demencijom češće se suočavaju s depresijom, doživljavaju veće opterećenje i pokazalo se da su lošijeg općeg zdravstvenog stanja (11,12). Njegovatelji su često osjećaju nepripremljenima uz neadekvatna znanja i vještine za pružanje skrbi za oboljeloga. Kao rezultat i akutnog (poglavito u bihevioralnoj simptomatici AB kao što je agresivno ponašanje, lutanje i sl.) i kroničnog stresa zbog nepredvidive prirode simptoma AB te sve većih zahtjeva vezanih uz njegu oboljeloga, njegovatelji mogu doživjeti ozbiljne negativne psihološke posljedice (poput depresije, anksioznosti, nesanice) te često izražavaju osjećaje ljutnje, iscrpljenosti, socijalne izolacije/usamljenosti, krivnje ili nemoći.

Postoje brojni mjerni istrumenti kako bi se objektivizirala problematika s kojom se susreću njegovatelji. Valjalo bi istaknuti Zarit upitnik (*Zarit Burden Interview*, ZBI), samoocjensku ljestvicu procjene opterećenja njegovatelja osoba oboljelih od Alzheimerove bolesti koja je jedna od najčešće korištenih i u kliničkoj praksi i u istraživanjima te se smatra

times. Having in mind the rapid ageing of the population, as well as current social trends (the disappearance of nuclear families, especially in urban areas), the number of beds in public facilities for the elderly is far below the required number, which is why many are forced to seek help in private institutions (especially at the terminal phase of the disease), which also significantly leads to financial difficulties.

EMOTIONAL AND MENTAL DISTRESS

Providing care to patients suffering from Alzheimer's disease is a lengthy and emotionally extremely exhausting experience. Apart from the patients, the caregivers themselves also go through suffering while meeting the demands and challenges their work requires, especially considering the nature of the disease which is incurable and ends in death. Compared to caregivers of other chronic patients, caregivers of patients with dementia more frequently suffer from depression, experience higher strain, and generally suffer from worse medical conditions (11,12). Caregivers often feel inadequate and believe they have insufficient knowledge and skills to provide the patients with the best possible care. As a result of both acute (especially in the case of behavioural symptoms of AD such as aggressive and wandering behaviour, etc.) and chronic distress caused by the unpredictable nature of AD symptoms, along with growing demands in the nursing of the sick, caregivers may experience significantly negative mental consequences (such as depression, anxiety, and insomnia) and often display feelings of anger, exhaustion, social isolation, loneliness, guilt, and powerlessness.

There are many measurement instruments for the objectification of problems caregivers face. It is important to mention the Zarit Burden Interview, ZBI – a self-evaluation scale that estimates the difficulties caregivers of AD patients encounter. ZBI is one of the most widely

tra da daje integrirane rezultate kod mjerenja subjektivnog opterećenja skrbi. U upitniku su opisane tri dimenzije opterećenja: utjecaj na društveni i osobni život njegovatelja, psihološko opterećenje te osjećaj krivnje. Neka istraživanja su pokazala da supružnici i djeca osoba oboljelih od Alzheimerove bolesti drugačije percipiraju opterećenje – dok supružnici naglašavaju deterioraciju njihovog osobnog i društvenog života, djeca, koja su načelno manje involvirana u svakodnevnu njegu, više su sklonija izražavati osjećaj krivnje da ne čine dovoljno za pacijenta (13). Također je dokazano da ne postoji značajna razlika u opterećenju njegovatelja u odnosu na dob, spol, uvjete života, bračni status ili status zaposlenja te da postoji snažnija povezanost između depresivnih simptoma kod njegovatelja i bihevioralnih problema pacijenta u odnosu na kognitivni i funkcionalni status pacijenta (14). Treba naglasiti da su Adelman i sur. u preglednom članku iz 2014. ukazali da čimbenici rizika za opterećenje njegovatelja uključuju ženski spol, nisko obrazovanje, življenje s oboljelim, veći broj sati provedenih u skrbi, depresiju, socijalnu izolaciju, financijski stres i nedostatak izbora da se bude njegovatelj (15) što upućuje na potrebu daljnjih istraživanja i klarifikacije ove problematike.

FIZIČKO OPTEREĆENJE NJEGOVATELJA

Oboljeli od AB tijekom trajanja bolesti i po samoj njenoj prirodi (uzimajući u obzir i učestale somatske komorbiditete) postaju sve više fizički nemoćni i ovisni o okolini što dovodi i do većih fizičkih zahtjeva za njegovatelje. U usporedbi s drugim njegovateljima, supružnici oboljelih provode najviše vremena pružajući skrb (16) te mogu doživljavati značajno veće opterećenje ne samo zbog sve većih zahtjeva oko njege kako bolest napreduje (npr. podizanje oboljeloga ili pomoć u osnovnim potrebama),

used parameter in clinical practice and research and is considered to provide integrated results in measuring subjective difficulties in caregiving. The questionnaire describes three burden dimensions: impact of social and personal life, psychological burden, and the caregiver's feelings of guilt. Some studies have shown that spouses and children of AD patients experience their burden in different ways – while spouses stress the deterioration of their personal and social lives, children, who are generally less involved in daily caregiving, are more inclined to express feelings of guilt for not doing enough for the patient (13). Moreover, it has been proven that there are no significant differences in caregiver burden with respect to their age, gender, life conditions, marital status, or employment, and that there is a stronger correlation between the caregiver's symptoms of depression and the patient's behavioural problems in relation to the cognitive and functional state of the patient (14). It is important to mention that in a review article from 2014 Adelman et al. pointed out that risk factors for caregiver burden are female gender, lower education, living with the patient, long hours spent nursing them, depression, social isolation, financial distress, and being compelled to assume the role of the caregiver (15), which clearly shows the need for further research and clarification of the issue.

PHYSICAL DIFFICULTIES

During the time of their sickness and due to the nature of the disease (taking into account frequent somatic comorbidities), AD patients become more and more physically impaired and reliant on their environment, which causes growing physical strain for the caregivers. In comparison to other caregivers, spouses of AD patients are those who spend most of the time nursing (16) and more frequently experience significant strain, not only due to greater demands in nursing as the disease progresses (for instance, physically having

nego i zbog njihovih zdravstvenih tegoba povezanih sa starenjem. Nekoliko istraživanja je pokazalo da polovica njegovatelja pati od barem jednog kroničnog zdravstvenog stanja (17,18). Recentna demografska istraživanja pokazuju da je među onima koji se brinu za osobe starije od 65 godina prosječna dob 63 godine, a trećina tih njegovatelja je u lošem zdravstvenom stanju (19). Kod njegovatelja su zabilježeni pogoršanje tjelesnog zdravlja (pogotovo kako bolest pacijenta kojeg njeguju progredira) i prerana smrt pa tako stariji supružnici koji se susreću s vrlo stresogenim zahtjevima za oboljeloga imaju 63 % veću stopu smrtnosti nego njihovi vršnjaci koji nisu njegovatelji (20). Pogoršanje tjelesnog zdravlja njegovatelja je posebno povezano s njegovateljima koji sebe percipiraju opterećenima (20). Isto tako, pojačano opterećenje njegovatelja je povezano s njegovim lošim zdravstvenim stanjem, rizičnim zdravstvenim ponašanjem (poput pušenja) i većom uporabom lijekova na recept (21). Različita istraživanja su pokazala da kod njegovatelja postoji veći rizik od poremećaja spavanja, slabijeg funkcioniranja imunološkog sustava, promijenjenog odgovora na cjepiva protiv gripe, sporijeg zacjeljivanja rana, povišene razine inzulina i krvnog tlaka, izmijenenog profila lipida te kardiovaskularnih bolesti (22).

ZAKLJUČAK

Alzheimerova bolest po svom tijeku, trajanju i ishodu zahtijeva skrb cjelokupne zajednice, ne samo pojedinca i njegove najbliže okoline. Poznato je da briga o pacijentu s demencijom može negativno utjecati na psihičko, fizičko, socijalno i financijsko zdravlje (11). Društvo bi (sustavom socijalne skrbi i zdravstvene zaštite) trebalo jasno definirati i naglasiti potrebe njegovatelja osoba oboljelih od Alzheimerove bolesti te preuzeti aktivnu ulogu u pomoći oboljelima i njegovateljima uz sredstva kojima

to move the patient or help them in basic activities), but also due to their health problems related to ageing. Several studies have shown that half of the caregivers suffer from at least one chronic health condition (17,18). Recent demographic studies have shown that among those who provide nursing to persons over 65 are on average 63 years old, whereas a third of them suffer from some sort of health condition (19). It has been found that caregivers suffer from a deterioration of health (especially when the patient's disease progresses) and premature death. Elderly spouses who are confronted with extremely stressful demands in the nursing process have a 63% higher chance of premature death than their peers who are not caregivers (20). A deterioration of physical health in caregivers is particularly relevant in the case of caregivers who consider themselves burdened (20). Likewise, increased caregiver burden correlates with deterioration of health, high-risk health behaviours (such as smoking) and higher intake rate of prescribed medications (21). Several studies have shown that caregivers are at risk of sleeping disorders, weaker functioning of the immune system, alterations in the response to influenza vaccination, slower wound healing process, elevated insulin levels and blood pressure, altered lipids profile, and cardiovascular diseases (22).

CONCLUSION

Alzheimer's disease, its course, duration, and outcome require an engagement of the entire community, and not only of individuals and a closer circle of people. It is known that the nursing of patients with dementia will most likely affect the mental, physical, social, and financial health of caregivers (11). Society (through health care and social security) should clearly define and stress the need for caregivers for people affected by Alzheimer's disease and assume an active role in helping patients and caregivers likewise through resources that can provide them with adequate

se može pružiti potrebna podrška. Ključan je dugoročni partnerski odnos pojedinca/njegovatelja i zajednice kako bi se prevenirali i reducirali multifaktorski štetni učinci na kvalitetu života i zdravlja koju treba sagledavati iz svih perspektiva. Važno je istaknuti i ulogu stručnih društava i građanskih udruga kao i ulogu osvještavanja javnosti o opisanim problemima i poteškoćama.

support. A long-term partnership between individuals/caregivers and the community is crucial in order to prevent and reduce multi-factor damaging effect on the quality of living and health, which should be examined from all perspectives. It is important to point out the role of professional associations and civil organizations, as well as the need to inform the public of the problems and difficulties described in this paper.

LITERATURA/*REFERENCES*

1. Mimica. N, Presečki P. Alzheimerova bolest – epidemiologija, dijagnosticiranje i standardno farmakološko liječenje. Medix 2012; XVIII(101/102): 152-8.
2. Vitezić D, Mimica N. Lijekovi za liječenje Alzheimerove bolesti – farmakoekonomski aspekti i smjernice. Medix 2012; XVIII(101/102): 216-9.
3. Mimica N, Presečki P. Current treatment options for people with Alzheimer's disease in Croatia. Chem-Biol Interact 2010; 187(1-3): 409-10.
4. Wimo A, Reed CC, Dodel R, Belger M, Jones R, Happich M *et al*. The GERAS Study: A prospective observational study of cost and resource use in community Dwellers with Alzherimer's disease in three European countries - Study design and baseline findings. J Alzheimers Dis 2013; 36: 385-99.
5. Alzheimer's Disease International. World Alzheimer Report 2009 - The global prvalence of dementia. London: ADI, 2009, pp. 25-44. http://www.alz.co.uk/research/world-report
6. Krol M, Papenburg J, Exel J. Does including informal care in economic evaluations matter? A systematic review of inclusion and impact of informal care in cost-effectiveness studies. Pharmacoeconomics 2015; 33(2): 123-35. doi: 10.1007/s40273-014-0218-y.
7. Schulz R, Tompkins CA. Informal caregivers in the United States: prevalence, caregiver characteristics, and ability to provide care in the role of human factors in home health care: Workshop summary. Olson S (ed.) Washington, DC: National Academies Press, 2010, pp 322.
8. Bakker C, de Vugt ME, van Vliet D, Verhey FR, Pijnenburg YA, Vernooij-Dassen MJ *et al.* The use of formal and informal care in early onset dementia: Results from the NeedYD study. Am J Geriatr Psychiatry 2013; 21(1): 37-45.
9. Gustavsson A, Cattelin F, Jönsson L. Costs of care in a mild-to-moderate Alzheimer clinical trial sample: key resources and their determinants. Alzheimers Dement 2011; 7(4): 466-73.
10. Gustavsson A, Jonsson L, Rapp T, Reynish E, Ousset PJ, Andrieu S *et al*. ICTUS Study group. Differences in resource use and costs of dementia care between European countries: baseline data from the ICTUS study. J Nutr Health Aging 2010; 14(8): 648-54.
11. Brodaty H, Green A. Who cares for the carer? The often forgotten patient. Australian Family Physician. 2002; 31(9): 833-6.
12. McDowell I, Stewart M, Kristjansson B, Sykes E, Hill G, Lindsay J. Data collected in the Canadian Study of health and Aging. International Psychogeriatrics 2001; 13(supplement 1): 29-39.
13. Ankri J, Andrieu S, Beaufils B, Grand A, Henrard JC. Beyond the global score of the Zarit Burden Interview: useful dimensions for clinicians. Int J Geriatr Psychiatry 2005; 20(3): 254-60.
14. Hérbert R, Bravo G, Préville M. Reliability, validity, and reference values of the Zarit Burden Interview for assessing informal caregivers of community-dwelling older persons with dementia. Can J Aging 2000; 19(4): 494-507.
15. Adelman R, Tmanova L, Delgado D, Dion S, Lachs M. Caregiver burden: a clinical review. JAMA 2014; 311, 1052-60. 10.1001/jama.2014.304
16. Keating NC. Statistics Canada. Housing, family and social statistics Division. Eldercare in Canada: Context, content and consequences. Statistics Canada, housing, family and Social Statistics Division; 1999.
17. Schulz R, O'Brien AT, Bookwala J, Fleissner K. Psychiatric and physical morbidity effects of dementia caregiving: prevalence, correlates, and causes. The Gerontologist 1995; 35(6): 771-91.
18. Collins LG, Swartz K. Caregiver care. Am Fam Physician. Am Fam Physician 2011; 1: 83(11): 1309-17.
19. Family Caregiver Alliance. Caregiver statistics: Demographics. 2019.
20. Schulz R, Beach SR. Caregiving as a risk factor for mortality: The caregiver health effects study. JAMA 1999; 282: 2215-9.
21. Beach S, Schulz R, Yee J *et al*. Negative and positive health effects of caring for a disabled spouse: Longitudinal findings from the Caregiver Health Effects Study. Psychol Aging 2000; 15(2): 259-71.
22. Hughes R (ed.). Patient safety and quality: An evidence-based handbook for nurses. Rockville, MD: Agency for Healthcare Research and Quality, 2008.

Neinvazivni test skrivenog cilja za probir osoba s mogućim početnim spoznajnim urušavanjem

/ A Non-invasive Hidden-Goal Test for Screening of Persons with Possible Cognitive Impairment

Goran Šimić[1*], Danira Bažadona[2], Ivan Fabek[1], Mirjana Babić Leko[1], Mihaela Bobić Rasonja[1], Dubravka Kalinić[3], Jake Raguz[1], Ervina Bilić[2], Ninoslav Mimica[3], Fran Borovečki[2], Patrick R. Hof[4]

[1] Sveučilište u Zagrebu, Medicinski fakultet, Hrvatski institut za istraživanje mozga, Zagreb, [2]Klinički bolnički centar Zagreb, Klinika za neurologiju, Zagreb, [3] Sveučilište u Zagrebu, Medicinski fakultet, Klinika za psihijatriju Vrapče, Zagreb, Hrvatska, [4] Medicinski fakultet Icahn Mount Sinai, Odjel neuroznanosti Fishberg, New York, SAD

/ [1] *University of Zagreb Medical School, Croatian Institute for Brain Research, Zagreb,* [2]*University Hospital Centre Zagreb, Department of Neurology, Zagreb,*[3] *University of Zagreb School of Medicine, University Psychiatric Hospital Vrapče, Zagreb, Croatia,* [4]*Icahn School of Medicine at Mount Sinai, Fishberg Department of Neuroscience, New York, USA*

ADRESA ZA DOPISIVANJE /
CORRESPONDENCE:
Prof. dr. sc. Goran Šimić, dr. med.
Zavod za neuroznanost
Hrvatski institut za istraživanje mozga
Šalata 3
10000 Zagreb, Hrvatska
E-pošta: goransimic@hotmail.com

KLJUČNE RIJEČI / ***KEY WORDS*****:**
Alzheimerova bolest / *Alzheimer's disease*
Spoznajno urušavanje / *Cognitive impairment*
Rana dijagnoza / *Early diagnosis*
Blagi spoznajni poremećaj / *Mild cognitive impairment*
Probir / *Screening*

TO LINK TO THIS ARTICLE: https://doi.org/10.24869/spsih.2019.412

Razvili smo novi uređaj koji pomaže u ranoj dijagnozi blagog kognitivnog oštećenja (*mild cognitive impairment* – MCI, odnosno blagog neurokognitivnog poremećaja prema DSM-5) i demencije (velikog neurokognitivnog poremećaja prema DSM-5, najčešće uzrokovanog Alzheimerovom bolešću - AB). Sustav se temelji na određivanju pozicije cilja koji nakon kratkotrajnog prikazivanja više nije vidljiv, pa ispitanik mora svoju navigaciju do cilja temeljiti na prethodno upamćenom položaju cilja u odnosu na svoj početni položaj (četiri egocentričke podvarijante) ili zadane orijentire (četiri

We have developed a new device that helps in early diagnosis of mild cognitive impairment (MCI or minor neurocognitive disorder according to DSM-5) and dementia (major neurocognitive disorder, mainly caused by Alzheimer's disease, AD). The system is based on the hidden goal task test in which the aim is to find a target that is not visible, but instead the navigation must be based on previously memorized target position in relation to the starting position (four egocentric test subvariants) or other navigational landmarks (four allocentric test subvariants). In this respect it resembles the

alocentričke podvarijante testa). U tom smislu ovaj test podsjeća na Morrisov vodeni labirint za glodavce. Testiranje prosječno traje oko 20 minuta te omogućuje brz, jeftin i neinvazivan dijagnostički postupak. Sustav je namijenjen klinikama i znanstvenoj zajednici, farmaceutskoj industriji te zdravstvenim i drugim ustanovama koje se brinu za starije osobe za koje je važno rano otkrivanje spoznajnog urušavanja, kao i kontinuirano praćenje njihovog statusa i uspješnosti terapijskih postupaka. Tijekom predavanja bit će prikazani naši preliminarni rezultati, koji su pokazali izvrstan potencijal testa za probir osoba s početnim spoznajnim urušavanjem.

Morris water maze task for rodents. The testing procedure has an average duration of about 20 minutes, which allows for a fast, low-cost, and non-invasive diagnostic procedure. The system is intended for the clinical and scientific community, pharmaceutical industry, healthcare institutions, and other organizations caring for the elderly and other populations for which early detection of cognitive impairment is important, as is ongoing monitoring of their status and the success of therapeutic procedures. During the meeting, I will present our preliminary results, which showed excellent potential of the hidden goal test for cognitive impairment population screening.

Gerontologija – sadašnjost i budućnoast zaštite zdravlja starijih osoba

/ Gerontology – The Present Time and Future Health Protection of the Elderly

Spomenka Tomek-Roksandić

Libertas međunarodno sveučilište
/ Libertas International University

ADRESA ZA DOPISIVANJE / *CORRESPONDENCE*:
Doc. prim. dr. sc. Spomenka Tomek-Roksandić
Libertas međunarodno sveučilište
Trg J. F. Kennedy 6b
10000 Zagreb, Hrvatska
E-pošta: spomenka.tomek-roksandic@stampar.hr

KLJUČNE RIJEČI / *KEY WORDS*:
Starije osobe / *Seniors,*
Gerontologija / *Gerontology,*
Gerijatrija / *Geriatrics*
Psihogerijatrija / *Psychogeriatrics*
GeroS/CEZIH / *GeroS / CEZIH*
Zdravstvene potrebe / *Health needs*
Gerontološki interdisciplinarni pristup / *Gerontological Interdisciplinary Approach*

TO LINK TO THIS ARTICLE: https://doi.org/10.24869/spsih.2019.414

Zaštita zdravlja starijih osoba je glavni pokazatelj napretka ili propusta u zaštiti zdravlja cjelokupnog pučanstva. Prema klasifikaciji UN-a Hrvatska se prema popisnoj 2011. godini, s udjelom od 17,7 % starijih od 65 godina, nalazi u četvrtoj skupini država svijeta s najstarijim pučanstvom. Projekcije ukazuju kako će do 2025. godine u Hrvatskoj udio starijih dosegnuti visokih 27,4 %. Zbog toga gerontologija postaje prioritet te upućuje na održivi razvoj zaštite zdravlja starijih.

Zaštita zdravlja starijih osoba zahtijeva interdisciplinarni gerontološki pristup, pa osim glavnog nositelja tima obiteljske medicine uključuje stručnjake različitog profila: od gerontologa, gerijatra, psihogerijatra, gerontološke/gerijatrijske medicinske sestre, socijalnog djelatnika gerontostomatologa, gerontonutrici-

Protecting the health of the elderly people is a major indicator of progress or failure in protecting the health of the general population. According to the UN classification, with a share of 17.7% of people over the age of 65, Croatia belongs to the fourth group of countries that have the oldest population (2011 census). Projections indicate that by 2025 the proportion of older people in Croatia will reach a high of 27.4%. This makes gerontology a priority and calls upon sustainable development of elderly health care. Elderly health care requires an interdisciplinary gerontological approach which, in addition to the main family medicine team leader, includes experts of different profiles, such as gerontologists, geriatricians, psychogeriatricians, gerontological/geriatric nurses, social workers gerontostomatologists, geronto-

onista, radnog terapeuta, fizioterapeuta za starije, gerontokineziologa, gerontotehnologa, gerontoantropologa do gerontodomaćice i gerontonjegovateljice te drugih. Time je nužna trajna izobrazba iz gerontologije i gerijatrije svih stručnjaka koji skrbe u zaštiti zdravlja starijih.

U Hrvatskoj je vrlo uspješan model izvaninstitucijske skrbi za starije organiziran putem gerontoloških centara. Nužno je istaknuti osnivanje dnevnih boravaka za osobe oboljele od Alzheimerove bolesti pri domovima za starije osiguravajući psihogerijatrijsku i palijativnogerijatrijsku skrb. Gerontološki centri (multifunkcijski, izvaninstitucijski centri za starije) i domovi za starije osobe (institucijski smještaj) pripadaju sustavu socijalne skrbi. Na sekundarnoj i tercijarnoj razini zdravstvene zaštite za starije legislativno je definirana specijalistička djelatnost gerijatrije osiguranjem dijagnostike, liječenja i rehabilitacije, a gerijatrijska zdravstvena njega za starije osobe (65+) u domovima za starije je standard Hrvatske komore medicinskih sestara. Gerontološko-javnozdravstvena djelatnost Referentnog centra Ministarstva zdravstva RH za zaštitu zdravlja starijih, Službe za javnozdravstvenu gerontologiju na nacionalnoj razini, centri za gerontologiju u županijskim zavodima za javno zdravstvo i Gradu Zagrebu značajno u sadašnjosti unaprjeđuje Programe mjera i postupaka u zaštiti zdravlja starijih osoba u Hrvatskoj. Međutim, preduvjet za utvrđivanje, praćenje i evaluaciju zdravstvenih potreba te povezivanje svih sudionika u zaštiti zdravlja starijih osoba je primjena inovacijskog informacijskog sustava projekt GeroS / CEZIH/SELFIE/ EU. Cilj je praćenje i evaluacija zdravstvenih potreba i funkcionalne sposobnosti starijih, sa svrhom unaprjeđenja zaštite zdravlja starijih osoba. Sukladno suvremenoj gerontološkoj doktrini, budućnost je integrirati sve sudionike u pružanju skrbi za starije, a to je ujedno i racionalizacija rastuće gerijatrijske zdravstvene potrošnje.

nutritionists, occupational therapists, physiotherapists, physiotherapists, gerontoanthropologists geronto-housewives, geronto-cargivers and others. This requires continuing education in gerontology and geriatrics for all professionals caring for the health of the elderly. In Croatia, a very successful model of non-institutional care for the elderly is organized through gerontology centres. It is necessary to highlight the establishment of day care centres for people with Alzheimer's disease in nursing homes providing psychogeriatric and palliative geriatric care. Gerontology centres (multifunctional, non-institutional care centres for the elderly) and nursing homes (institutional accommodation) belong to the social welfare system. At the secondary and tertiary levels of health care for the elderly, the specialist activity of geriatrics providing diagnostics, treatment, and rehabilitation is legislated, and geriatric health care for the elderly (65+) in nursing homes is the standard of the Croatian Chamber of Nursing. The gerontological-public health activities of the Referral Centre of the Ministry of Health of the Republic of Croatia for the protection of the health of the elderly, Public Health Gerontology Service at the national level, Centres for Gerontology at the County Institutes of Public Health and the City of Zagreb significantly enhance the Programs of Measures and Procedures for the Protection of the Elderly in Croatia at the present time. However, the prerequisite for identifying, monitoring, and evaluating health needs and connecting all stakeholders in the protection of the health of the elderly is the application of the GeroS/CEZIH/SELFIE/EU project innovation system. The aim is to monitor and evaluate the health needs and functional abilities of the elderly people, with a view to improving the health care of the elderly. In line with contemporary gerontological doctrine, in the future all actors in the provision of care for the elderly should be integrated, which simultaneously represents a rationalization of the growing expenses related to geriatric health.

LITERATURA/*REFERENCES*

1. Tomek-Roksandić S, Mimica N, Kušan Jukić M i sur. Alzheimerova bolest i druge demencije – rano otkrivanje i zaštita zdravlja. Zagreb: Medicinska naklada, 2017.
2. http://www.stampar.hr/gerontologija. Referentni centar MZ za zaštitu zdravlja starijih osoba - Služba za javnozdravstvenu gerontologiju NZJZ „Dr. Andrija Štampar.
3. Tomek-Roksandić S i sur. Racionalizacija gerijatrijske potrošnje-uspostava GeroS-a neodvojivo povezan s CEZIH-om. Ekonomska politika Hrvatske u 2016. Inženjerski biro, 2015, str. 259-90.
4. Tomek-Roksandić S i sur. Socioekonomski i gerontotehnološki inovacijski program kao doprinos razvoju srebrne ekonomije. Ekonomska politika Hrvatske u 2017. Inženjerski biro, 2016, str. 267-310.

Suicidalnost u starijih osoba

/ Suicide in Older Adults

Porin Makarić[1], Domagoj Vidović[1,2], Ivan Ćelić[1], Tihana Jendričko[1,3], Petrana Brečić[1,2]

[1]Klinika za psihijatriju Vrapče, Zagreb, [2] Sveučilište u Zagrebu, Odsjek za psihologiju, Hrvatski studiji, [3]Sveučilište u Zagrebu, Pravni fakultet, Katedra za područja socijalnog rada, Zagreb, Hrvatska

/ [1]University Psychiatric Hospital Vrapče, Zagreb, [2]University of Zagreb, Centre for Croatian Studies, Department of Psychology, [3]University of Zagreb, Faculty of Law, Social Work Study Centre, Zagreb, Croatia

ADRESA ZA DOPISIVANJE / *CORRESPONDENCE*:
Porin Makarić, dr. med.
Klinika za psihijatriju Vrapče
Bolnička cesta 32
10090 Zagreb, Croatia
E-pošta: porin.makaric@gmail.com

KLJUČNE RIJEČI / *KEY WORDS*:
Depresija / *Depression*
Starija životna dob / *Older Adults*
Psihički poremećaji / *Psychic Disturbances*
Prevencija / *Prevention*
Suicidalnost / *Suicide*

TO LINK TO THIS ARTICLE: https://doi.org/10.24869/spsih.2019.417

Prema posljednjim podatcima WHO-a oko 800 000 ljudi godišnje počini suicid što bi otprilike značilo da si svakih 40 sekundi jedna osoba oduzme život. Najveća globalna stopa suicida je u Europi te iznosi 15,4/100 000 stanovnika. Zastrašujući je podatak da je samoubojstvo drugi vodeći uzrok smrti u osoba između 15. i 29. godine života. Iako su pokušaji suicida češći u adolescenata i mlađih odraslih osoba, muškarci i žene starije životne dobi u gotovo svim zemljama svijeta imaju veću stopu počinjenog suicida. Nadalje, stopa suicida se povećava u osoba starijih od 60 godina.Među čimbenicima rizika za suicidalno ponašanje kod starije populacije su duševni i neurokognitivni poremećaji, narušeno tjelesno zdravlje te socijalni aspekti života. Depresivni simptomi se često kod starijih osoba zanemaruju ili pak povezuju s ranim stadijima demencije, a zapravo prema nekim istraživanjima do 97 % starijih osoba koje su

According to the latest WHO data, every year approximately 800,000 people die due to suicide, which is one person every 40 seconds. As the region with the highest rate of suicide in the world, Europe has a suicide rate of 15.4 per 100,000 people. Suicide is the second leading cause of death in people between 15 and 29 years of age. Although suicide attempts are more common in adolescents and young adults, in most countries in the world older men and women have a higher rate of suicide. Furthermore, suicide rates are increasing in people over 60 years of age. The risk factors for suicidal behaviour in the elderly include mental and neurocognitive disorders, impaired physical health, and social aspects of life. Depressive symptoms in the elderly are often neglected or associated with the early stages of dementia, and in fact, according to some studies, up to 97% of older people who committed suicide

počinile suicid su bolovale od nekog poremećaja raspoloženja. U osoba oboljelih od demencije najrizičnija skupina su bolesnici u ranoj fazi bolesti kod kojih su kognitivne funkcije još uvijek očuvane u mjeri dostatnog uvida o daljnjem negativnom tijeku bolesti. Prevalencija različitih tjelesnih bolesti kao i njihova kumulacija s dobi povećavaju rizik za suicid u usporedbi sa zdravom osobom istih godina. Gubitak voljene osobe i socijalna izoliranost su jednako važni faktori koje ne smijemo zanemariti. Prevencija samoubojstva u starijoj životnoj dobi složen je zadatak i proces koji zahvaća različite grane medicine i zahtijeva specijaliziranu edukaciju kako bi se na vrijeme moglo prepoznati rizične faktore te adekvatno djelovati.

had suffered from mood disorders. In people with dementia, the risk for suicide is highest during the early stage of the disease, as the cognitive function is still preserved and the patients have sufficient insight into the negative course of the disease. Compared to a healthy person of the same age, the prevalence of various physical ailments and their cumulation with age increase the risk of suicide. The loss of a loved one and social isolation are also important risk factors that should not be ignored. Suicide prevention in the elderly is a complex task that requires collaboration of different branches of medicine and specialized education in order to identify risk factors in a timely manner and act accordingly.

LITERATURA/*REFERENCES*

1. World Health Organization 2018. Suicide data.
2. Conejero I, Olié E, Courtet P, Calati R. Suicide in older adults: current perspectives. Clin Interv Aging 2018; 13: 691-9.
3. Wand AP, Peisah C, Draper B, Brodaty H. Understanding self-harm in older people: a systematic review of qualitative studies. Aging Ment Health 2018;22(3):289–98.

Analiza starijih žrtava obiteljskog nasilja u Savjetovalištu za žrtve nasilja

/ Analysis of Elder Victims of Domestic Violence in Counselling Center for Victims

Zrnka Kovačić Petrović[1,2], Tina Peraica[3,4], Dragica Kozarić-Kovačić[4]

[1]Sveučilište u Zagrebu, Medicinski fakultet, Zagreb, [2]Klinika za psihijatriju Vrapče Zagreb, [3]Klinička bolnica Dubrava, Klinika za psihijatriju, Referentni centar Ministarstva zdravstva za poremećaje uzrokovane stresom, Zagreb, [4]Sveučilišni odjel za forenzične znanosti Sveučilišta u Splitu, Split, Hrvatska

/ [1]*University of Zagreb, School of Medicine, Zagreb,* [2]*University Psychiatric Hospital Vrapče, Zagreb,* [3]*University Hospital Dubrava, Department of Psychiatry, Referral Center for Stress-related Disorders of the Ministry of Health, Zagreb,* [4] *University of Split, University Department for Forensic Sciences, Split, Croatia*

ADRESA ZA DOPISIVANJE / *CORRESPONDENCE*:

Doc. dr. sc. Zrnka Kovačić Petrović, dr. med.
Klinika za psihijatriju Vrapče
Bolnička cesta 32
10 090 Zagreb, Hrvatska
E-pošta: zrnka.kovacic@gmail.com

KLJUČNE RIJEČI / *KEY WORDS*:

Žrtve / *Victims*
Nasilje / *Violence*
Savjetovalište za žrtve nasilja */ Counselling Centre for Victims of Domestic Violence*

TO LINK TO THIS ARTICLE: https://doi.org/10.24869/spsih.2019.419

Pozadina: Nasilje u obitelji utječe na svaku dobnu skupinu i prisutno je tijekom cijelog životnog vijeka, iako se manje zna o prirodi i utjecaju nasilja u obitelji među starijim osobama.

Cilj: Istražiti neke socioekonomske čimbenike, vrstu nasilja u obitelji i počinitelje nasilja prema starijim osobama, prijavljivanje nasilja i vrste intervencija kod nasilja prema starijim osobama.

Metoda: Od 3164 odrasle osobe (25,1 % muškaraca i 74,9 % žena; prosječna dob: 40,7±11,5 godina), koje su se javile u Savjetovalište za žrtve nasilja u obitelji u razdoblju od 1. siječnja 2013. do 20. lipnja 2017. godine, 48,9 % je bilo u dobi od 18 do 39 godina, 44,7 % u dobi od 40 do 59 godina i 6,3 % iznad 60 godina. Dob

Background: Domestic violence (DV) affects every age group and is present throughout life, although less is known about the nature and impact of DV among elderly persons.

Objective: To explore some socioeconomic conditions, type of domestic violence and perpetrators against elderly persons, data related to reporting violence, and types of intervention in the maltreatment of the elderly.

Method: Of 3164 adults (25.1% men and 74.9% women; mean age: 40.7+/-11.5 years) who visited the Counselling Centre for Victims of Domestic Violence in Zagreb from January 1, 2013 to June 20, 2017, 48.9% were aged between 18 and 39, 44.7% were aged between 40 and 59, and 6.3% were over 60 years of age.

starijih sudionika definirana je u skladu s UN-ovom definicijom starih osoba (osobe u dobi od 60 i više godina).

Rezultati: Starije žrtve su značajno češće imale primarno obrazovanje u odnosu na mlađe žrtve (p<.001). Udovci/e su značajno češće bile starije osobe u odnosu na mlađe osobe (p<.001). Mlađe žrtve su bile češće zaposlene (p<.001), a starije žrtve su češće bile umirovljenici (p<.001). Djeca i drugi članovi obitelji su značajno češće bili počinitelji nasilja u obitelji prema starijim osobama u usporedbi s mlađim osobama (p<.001). Višegodišnje nasilje je češće prema starijim nego mlađim osobama (p<.001). Psihičko i financijsko zlostavljanje je učestalije kod starijih u odnosu na mlađe osobe (p=.04). Mlađe osobe češće prijavljuju nasilje u obitelji centrima za socijalnu skrb (p<.001) i prekršajnim sudovima (p=.012) nego starije osobe. Obje dobne skupine su podjednako koristile sve oblike savjetovanja.

Zaključak*:* Psihološko i financijsko nasilje je najčešći oblik zlostavljanja starijih žrtava. Starije osobe su osobito ranjiva skupina jer rijetko prijavljuju nasilje u obitelji zbog česte ovisnosti o zlostavljaču/ima (pretežno djeca i članovi obitelji).

The age of older participants was defined in line with the UN definition of older people (persons aged 60 years and older).

Results: Elder victims more often had primary education in comparison with younger victims (p<.001). Widows and widowers were significantly more likely to be elder adults than younger adults (p<.001). Younger victims were more often employed (p<.001) and older victims were more often retired (p<.001). Children and other family members were significantly more likely to be perpetrators of DV against elder persons when compared to young persons (p<.001). Long-term abuse was significantly more common among elder persons than young persons (p<.001). Psychological and financial abuse was more frequent in the elderly than in younger persons (p=.04). Younger adults reported DV to social welfare centres (p<.001) and misdemeanour courts (p=.012) more often than the elderly. Both age groups used all forms of counselling equally.

Conclusion: Psychological abuse and financial exploitation were the most prevalent form of maltreatment among elder victims. Elder persons are a particularly vulnerable group because they rarely report DV due to frequent dependence on the abuser/s (mainly children and family members).

LITERATURA/*REFERENCES*

1. Knight L, Hester M. Domestic violence and mental health in older adults. Int Rev Psychiatry 2016; 28(5): 464-74.
2. Ayalon L, Lev S, Green O, Nevo U. A systematic review and meta-analysis of interventions designed to prevent or stop elder maltreatment. Age Aging 2016; 45(2): 216-27.
3. Yan Y, Mikton RC, Gassoumis DZ, Wilber HK. Elder abuse prevalence in community setting: a systematic review and meta-analysis. Lancet Glob Health 2017; 5(2): e147-56.

Primjena transkranijske magnetne stimulacije kod starije populacije

/ Use of Transcranial Magnetic Stimulation in the Elderly Population

Damir Mulc[1], Tamara Sabo[1], Dubravka Kalinić[1, 2], Ninoslav Mimica[1, 2]

[1]Klinika za psihijatriju Vrapče, Zagreb, [2]Sveučilište u Zagrebu, Medicinski fakultet, Zagreb, Hrvatska / [1]*University Psychiatric Hospital Vrapče, Zagreb,* [2]*University of Zagreb, School of Medicine, Zagreb, Croatia*

ADRESA ZA DOPISIVANJE / *CORRESPONDENCE:*
Damir Mulc, dr. med.
Klinika za psihijatriju Vrapče
Bolnička cesta 32
10090 Zagreb, Hrvatska
E-pošta: damir.mulc@hotmail.com

KLJUČNE RIJEČI / *KEY WORDS*:
Demencija / *Dementia*
Depresija / *Depression*
Starije osobe / The *Elderly*
Transkranijska magnetna stimulacija / *Transcranial Magnetic Stimulation*
rTMS / rTMS

TO LINK TO THIS ARTICLE: https://doi.org/10.24869/spsih.2019.421

Depresija kod starijih ljudi s obzirom na globalno starenje populacije postaje ozbiljan javnozdravstveni problem. Trenutno se procjenjuje kako 8 – 16 % osoba starijih od 65 godina ima klinički značajne depresivne simptome što doprinosi povećanom pobolu i preranoj smrti takvih osoba (1). Kod starijih ljudi oboljelih od depresije često su prisutna i kognitivna oštećenja, od blagih kognitivnih oštećenja (MCI) pa sve do demencije. Općenito, pacijenti s depresijom pokazuju značajno povećani rizik od demencije od opće populacije. Također, smatra se kako je depresivna simptomatologija kod podgrupe starijih ljudi u stvari prodrom demencije (2). Iz navedenog bi se moglo zaključiti kako je depresija u starijih osoba povezana s povećanom pojavom kognitivnih oštećenja, a pad kognitivnih funkcija tijekom vremena prediktor za razvoj demencije.

Given the global ageing of the population, depression in the elderly is becoming a serious public health problem. It is currently estimated that 8-16% of people over 65 years of age have clinically significant depressive symptoms, which contributes to increased sickness and premature death of such individuals (1). In elderly people suffering from depression, cognitive impairments are often present, from mild cognitive impairments (MCI) to dementia. In general, patients with depression show a significantly increased risk of dementia than the general population (1). It is also believed that in a subgroup of older people depressive symptomatology is actually a penetrating symptom of dementia (2). Therefore, it can be concluded that depression in the elderly is associated with an increased occurrence of cognitive impairment, and a decline in cognitive function over time is a predictor for the development of dementia.

Pravovremena dijagnoza je ključna, kao i kasnije liječenje depresije u starijih ljudi, koje se sastoji od primjene antidepresiva (AD), elektrokonvulzivne terapije (EKT), a u zadnje vrijeme sve češće i primjene repetitivne transkranijske magnetne stimulacije (rTMS). rTMS je neinvazivna tehnika kojom se modulira neuralna aktivnost pomoću pulsnog magnetskog polja. Smanjenje simptoma depresije se najčešće postiže rTMS-om u području dorzolateralnog prefrontalnog korteksa (dlPFC). Istraživanja pokazuju veliku ulogu rTMS-a u liječenju terapijski rezistentnih depresija (3).

Prema nekim smjernicama rTMS je odobren kao druga linija za liječenje depresija. Često se koristi i kao komplementarna metoda liječenja uz EKT zbog malog broja ozbiljnih nuspojava. Prema literaturnim podatcima EKT je učinkovitiji u liječenju depresije kod starijih osoba nego rTMS što se tiče kratkoročnog učinka, ali još nema dovoljno podataka pomoću kojih bi se napravila usporedba dugoročnih rezultata. Također, EKT je superiorniji rTMS-u u slučaju psihotičnih simptoma tijekom depresivnih epizoda. U slučajevima kada nema psihotičnih elemenata rTMS se smatra jednako učinkovit kao EKT (1,3). Čimbenici učinkovitosti rTMS-a kod starijih su dob bolesnika, stupanj možđane atrofije, broj isporučenih impulsa, klinički profil bolesnika u koji spadaju medicinski komorbiditeti, prisutnost psihotičnih elemenata, simptomi melankolije te stupanj kognitivnog oštećenja (1).

Potrebna su daljnja istraživanja učinkovitosti rTMS-a kod starijih ljudi zbog česte prakse isključenja ove dobne skupine iz istraživanja.

Timely diagnosis is crucial, as well as later treatment of depression in elderly people consisting of the administration of antidepressants (AD), electroconvulsive therapy (ECT), and recently more frequent administration of repetitive transcranial magnetic stimulation (rTMS). RTMS is a non-invasive technique that modulates neural activity using a pulse magnetic field. The reduction of symptoms in depression is usually achieved by rTMS in the area of dorsolateral prefrontal cortex (dlPFC). Studies show a large role of rTMS in the treatment of therapeutically resistant depression (3).

According to some guidelines, rTMS is approved as a second line to treat depression. It is also often used as a complementary method of treatment with ECT due to a small number of serious side effects. According to existing literature, ECT is more effective in treating depression in older people than rTMS as regards short-term effects, but there is still insufficient data to compare long-term results. Also, ECT is superior to rTMS in case of psychotic symptoms during depressive episodes. In cases where there are no psychotic elements, rTMS is considered as effective as ECT (1,3). The efficacy factors of rTMS in the elderly are the age of the patient, the degree of cerebral atrophy, the number of impulses delivered, the clinical profile of patients with medical comorbidities, the presence of psychotic elements, the symptoms of melancholia, and the degree of cognitive impairment (1).

Further studies on the effectiveness of rTMS in older people are needed due to the frequent practice of excluding this age group from research.

LITERATURA/*REFERENCES*

1. Sabesan P, Lankappa S, Khalifa N, Krishnan V, Gandhi R, Palaniyappan L. Transcranial magnetic stimulation for geriatric depression: Promises and pitfalls. World J Psychiatry 2015; 5(2): 170-81.
2. Byers AL, Yaffe K. Depression and risk of developing dementia. Nat Rev Neurol 2011 ;7(6): 323-31.
3. Leblhuber F, Steiner K, Fuchs D. Treatment of patients with geriatric depression with repetitive transcranial magnetic stimulation. J Neural Transm 2019; 126(8): 1105-10.

Izazovi u sestrinskoj praksi tijekom rada s osobama s demencijom

/ Challenges in Nursing Practice While Working with People with Dementia

Martina Fremec, Nikolina Kipčić

Klinika za psihijatriju Vrapče, Referentni centar Ministarstva zdravstva Republike Hrvatske za Alzheimerovu bolest i psihijatriju starije životne dobi, Zagreb, Hrvatska

/ University Psychiatric Hospital Vrapče, Referral Centre of Ministry of Health of the Republic of Croatia for Alzheimer's Disease and Old Age Psychiatry, Zagreb, Croatia

ADRESA ZA DOPISIVANJE / *CORRESPONDENCE*:

Martina Fremec, bacc. med. techn.

Klinika za psihijatriju Vrapče

Bolnička cesta 32

HR-10090 Zagreb, Hrvatska

E-pošta: martina.hrlic@windowslive.com

KLJUČNE RIJEČI / *KEY WORDS*:

Demencija / *Dementia*

Komunikacija / *Communication*

Sestrinska skrb / *Nursing care*

TO LINK TO THIS ARTICLE: https://doi.org/10.24869/spsih.2019.423

Demencija je sindrom, odnosno skup simptoma, koji se manifestiraju postupno ili naglo. Karakteriziraju ju propadanje sposobnosti pamćenja, učenja i rasuđivanja te promjene u ponašanju. Zbog specifičnosti tijeka bolesti osoba s demencijom sve teže samostalno obavlja svakodnevne aktivnosti te postaje ovisna o tuđoj pomoći. Potrebe osoba oboljelih od demencije raznolike su te tako zahtijevaju razumijevanje, strpljenje i empatiju zdravstvenih djelatnika s kojima se susreću u bolnici. Medicinsko osoblje s kojima se oboljela osoba susreće kod dolaska u bolnicu treba poznavati cijelu prirodu bolesti, kako bi moglo odgovarajuće pristupiti bolesniku. Komunikaciju s bolesnikom oboljelim od demencije treba prilagoditi prema stadiju bolesti. Osobe oboljele od demencije imaju poteškoća i u osobnom

Dementia is a syndrome or a set of symptoms that manifest either gradually or suddenly. It is characterized by a decline in ability to remember, learn, and reason, and changes in behaviour. Due to the specificity of the course of the disease, for the demented person it becomes increasingly difficult to perform daily activities independently and the person becomes dependent on someone else. The needs of people with dementia are diverse and thus require the understanding, patience, and empathy of the healthcare professionals they meet at the hospital. The medical staff encountered by the sick person upon arrival at the hospital should know the full nature of the disease so that they can approach the patient appropriately. Communication with a patient with dementia should be tailored to the disease stage. People

izražavanju, ali i u razumijevanju onoga što im se govori. U radu s osobama oboljelima od demencije važan je holistički pristup u svim aspektima sestrinske skrbi. Takve su osobe vrlo često u strahu koji mogu iskazivati nespecifičnim reakcijama ili emocijama koje se mogu manifestirati nemirom, bezvoljnošću, odbacivanjem i nesuradnjom. Osoblje koje dolazi u kontakt s osobama oboljelima od demencije treba razviti ugodno ozračje koje će rezultirati smanjenom napetošću osobe koja se liječi te samim time olakšati komunikaciju i steći povjerenje oboljele osobe. Rad s osobama oboljelima od demencije podrazumijeva stalno nadograđivanje vlastitog znanja kako bi mogli što bolje skrbiti o osobama oboljelima od demencije te pružiti adekvatnu skrb bez obzira u kojoj se fazi bolesti osoba trenutno nalazi. Sestrinske intervencije zahtijevaju individualizirani plan skrbi koji će rezultirati zadovoljstvom bolesnika, članova obitelji i osoblja na radilištu.

with dementia have difficulties both in expressing themselves and in understanding what is being said to them. When working with people with dementia, it is important to have a holistic approach in all aspects of nursing care. Such people are very often afraid, which they may express through nonspecific reactions or emotions that may manifest as restlessness, apathy, rejection, and lack of cooperation. The personnel who come in contact with people with dementia should develop a comfortable atmosphere that will result in a reduced tension of the person being treated and thus facilitate communication and gain the confidence of the patient. Working with people with dementia involves healthcare professionals constantly improving their knowledge so that they can provide a better care for people with dementia and adequate care regardless of the disease stage. Nursing interventions require an individualized care plan that will satisfy patients, family members, and on-site staff.

Upute autorima

O časopisu

Socijalna psihijatrija je recenzirani časopis koji je namijenjen objavljivanju radova iz područja socijalne psihijatrije, ali i iz kliničke psihijatrije i psihologije, biologijske psihijatrije, psihoterapije, forenzičke psihijatrije, ratne psihijatrije, alkohologije i drugih ovisnosti, zaštite mentalnog zdravlja osoba s intelektualnim teškoćama i razvojnim poremećajima, epidemiologije, deontologije, organizacije psihijatrijske službe. Praktički nema područja psihijatrije iz kojeg do sada nije objavljen pregledni ili stručni rad.

Svi radovi trebaju biti pisani na hrvatskom i engleskom jeziku.

Svi zaprimljeni radovi prolaze kroz isti proces recenzije pod uvjetom da zadovoljavaju i prate kriterije opisane u Uputama za autore i ne izlaze iz okvira rada časopisa.

Uredništvo ne preuzima odgovornost za gledišta u radu - to ostaje isključivom odgovornošću autora.

Časopis objavljuje sljedeće vrste članaka: uvodnike, izvorne znanstvene, stručne i pregledne radove, prikaze bolesnika, lijekova i metoda, kratka priopćenja, osvrte, novosti, prikaze knjiga, pisma uredništvu i druge priloge iz područja socijalne psihijatrije i srodnih struka.

Iznimno Uredništvo časopisa može prihvatiti i drugu vrstu rada (prigodni rad, rad iz povijesti struke i sl.), ako ga ocijeni korisnim za čitateljstvo.

Tijekom cijelog redakcijskog postupka, *Socijalna psihijatrija* slijedi sve smjernice Odbora za etiku objavljivanja (*Committee of publication ethics* – COPE), detaljnjije na: https://publicationethics.org/files/Code%20of%20Conduct_2.pdf, kao i preporuke ponašanja, izvještavanja, uređivanja i objavljivanja znanstvenih radova u časopisima medicinske tematike kojeje objavio Međunarodni odbor urednika medicinskih časopisa (*International Committee of Medical Journal Editors* – ICMJE), detaljnije na: http://www.icmje.org/journals-following-the-icmje-recommendations/.

Urednici časopisa *Socijalna psihijatrija* također su obvezni osigurati integritet i promicati inovativne izvore podataka temeljenih na dokazima, kako bi održali kvalitetu i osigurali utjecaj objavljenih radova u časopisu, a sukladno načelima iznesenim u Sarajevskoj deklaraciji o integritetu i vidljivosti (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5209927/).

Uredništvo

Svaki rad zaprimljen u Uredništvu časopisa *Socijalna psihijatrija* pregledava glavni urednik. Ako rad ne zadovoljava kriterije opisane u Uputama za autore, glavni urednik časopisa rad vraća autoru. Radovi koji zadovoljavaju uvjete bit će upućeni na recenziju.

Recenzija

Radovi koji su pisani prema Uputama za autore, šalju se na recenziju.

Časopis *Socijalna psihijatrija* recenzentima savjetuje da se pridržavaju uputa u Uputama za recenzente koje su dostupne na mrežnim stranicama Časopisa.

Instructions to authors

Aim & Scope

Socijalna psihijatrija is a peer-reviewed journal intended for publication of manuscripts from the fields of social psychiatry, clinical psychiatry and psychology, biopsychology, psychotherapy, forensic psychiatry, war psychiatry, alcoholism and other addictions, mental health protection among persons with intellectual and developing disabilities, epidemiology, deontology and psychiatric service organisations.

All manuscripts must be written in the Croatian and English language.

All manuscripts undergo the same review process if they follow the scope of the Journal and fulfil the conditions according to the Author guidelines.

The Editorial board will not take the responsibility for the viewpoint of the Author's manuscript – it remains the exclusive responsibility of an Author.

Socijalna psihijatrija publishes the following types of articles: editorials, original scientific papers, professional papers, review's, case reports, reports on drugs and methods of treatment, short announcements, annotations, news, book review's, letters to the editor, and other papers in the field of social psychiatry.

Exceptionally, the Editorial board can accept other kinds of paper (social psychiatry event paper, social psychiatry history-related paper, etc.).

During the whole peer-reviewed process, the *Socijalna psihijatrija* journal follows the Committee of publication ethics (COPE) guidelines (https://publicationethics.org/files/Code%20of%20Conduct_2.pdf) as well as the "Recommendations for the conduct, reporting editing, and publication of scholarly work in medical journals" set by the International Committee of Medical Journal Editors (ICMJE - http://www.icmje.org/journals-following-the-icmje-recommendations/).

Editors at the *Socijalna psihijatrija* journal pay close attention to the integrity and visibility of scholarly publications as stated in Sarajevo Declaration (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5209927/).

Editorial board

Each received manuscript is evaluated by the Editor-in-Chief. The manuscripts that do not meet the main criteria listed in the Author guidelines are returned to the Author. Manuscripts that are qualified are processed further.

Peer-review

Manuscripts that meet the scope of the Journal and are prepared according to the Author guidelines are sent to peer-review.

Socijalna psihijatrija advises its reviewers to adhere to the Journal's Guidelines for peer-reviewers available on the Journal webpage.

Etički kodeks

Podrazumijeva se da su svi autori radova suglasni o publikaciji i da nijedan dio rada nije prije publikacije u *Socijalnoj psihijatriji* već bio objavljen u drugom časopisu te da nije u postupku objavljivanja u drugom časopisu.

Uredništvo može objaviti neki već prije tiskani tekst uz dogovor s autorima i izdavačima.

Rad objavljen u *Socijalnoj psihijatriji* smije se objaviti drugdje bez dopuštenja autora, uredništva i izdavača, uz navod da je već objavljen u *Socijalnoj psihijatriji*.

Autorska prava i licence

Nakon što je rad prihvaćen autori moraju jamčiti da su sva autorska prava na rukopis prenesena u časopis *Socijalna psihijatrija*. Izdavač (Medicinska naklada d.o.o.) ima pravo reproducirati i distribuirati članak u tiskanom i elektroničkom obliku bez traženja dopuštenja od autora. Svi objavljeni rukopisi podliježu licenci *Creative Commons Attribution* koja korisnicima omogućuje čitanje, preuzimanje, kopiranje, distribuiranje, ispis, pretraživanje ili povezivanje punih tekstova ovih članaka u bilo kojem mediju ili formatu. Također, korisnici mogu mijenjati tekst pod uvjetom da je originalni rad pravilno naveden i bilo kakva promjena pravilno naznačena. Potpuna zakonska pozadina licence dostupna je na: https://creativecommons.org/licenses/by/4.0/legalcode

Sukob interesa

Časopis *Socijalna psihijatrija* potiče i podržava sve autore i recenzente da prijave potencijalne sukobe interesa kako bi se osigurala transparentnost prigodom pripreme i recenzije radova. Prema ICMJE-u: „Sukob interesa postoji ako autorove (ili institucija u kojoj je autor zaposlen) financijske (zaposlenje, u posjedu dionica, plaćeni honorar), akademske, intelektualne ili osobne veze neprimjereno utječu na njegove odluke“ (detaljnije objašnjenje dostupno je na mrežnim stranicama ICMJE-a: http://www.icmje.org/conflicts-of-interest/).

Otvoreni pristup

Časopis *Socijalna psihijatrija* je časopis otvorenog pristupa i njegov je sadržaj dostupan besplatno na mrežnim stranicama časopisa.

Naplata troškova prijevoda radova

Autor snosi dio troškova prijevoda na engleski ili hrvatski jezik, odnosno lektoriranja rada.

Oprema rukopisa

Rad i svi prilozi dostavljaju se isključivo u elektroničkom obliku. Preporučena duljina teksta iznosi do 20 kartica (1 kartica sadrži 1800 znakova s razmacima). Tekstove treba pisati u Wordu, fontom postavljenim za stil Normal, bez isticanja unutar teksta, osim riječi koje trebaju biti u boldu ili italiku. Naslove treba pisati istim fontom kao osnovni tekst (stil Normal), u poseban redak, a hijerarhiju naslova može se označiti brojevima (npr. 1., 1.1., 1.1.1. itd.).

Autoru koji je zadužen za dopisivanje treba navesti titulu, ime i prezime, adresu, grad, državu i adresu e-pošte. Također je potrebno navesti i ORCHID identifikatore svih autora (više na https://orcid.org/register).

Naslovna stranica rada sadrži: naslov i skraćeni naslov rada, puna imena i prezimena svih autora, naziv ustanova u kojima rade. Sažetak treba sadržavati do 200 riječi. U sažetku treba navesti temu i svrhu rada, metodologiju, glavne rezultate i kratak zaključak. Uz sažetak treba navesti 3 do 5 ključnih riječi koje su bitne za brzu identifikacijsku klasifikaciju sadržaja rada.

Znanstveni i stručni radovi sadrže ove dijelove: sažetak, uvod, cilj rada, metode, rezultati, rasprava i zaključci.

Uvod je kratak i jasan prikaz problema; u njemu se kratko spominju radovi onih autora koji su u izravnoj vezi s istraživanjem što ga rad prikazuje.

Ethical code

All the submissions are accepted with the understanding that they have not been and will not be published elsewhere in any substantially format.

The Editorial board, with the agreement of the Author and Publisher, can republish previously published manuscripts.

The manuscript published in *Socijalna psihijatrija* can be published elsewhere without the permission of the Author, Editorial board and Publisher, with the note that it has already been published in *Socijalna psihijatrija*.

Copyright and publication licence

After a manuscript is accepted for publication, the Authors must guarantee that all copyrights of the manuscript are transferred to *Socijalna psihijatrija*. The publisher (Medicinska naklada d.o.o.) has the right to reproduce and distribute manuscripts in printed and electronic form without asking permission from Authors. All manuscripts published on line are subject to the Creative Commons Attribution License which permits users to read, download, copy, distribute, print, search, or link to the full texts of these articles in any medium or format. Furthermore, users can remix, transform, and build upon the material, provided the original work is properly cited and any changes properly indicated. The complete legal background of the license is available at: https://creativecommons.org/licenses/by/4.0/legalcode.

Conflict of interest

Socijalna psihijatrija encourages all Authors and Reviewers to report any potential conflicts of interest to ensure complete transparency regarding the preparation and reviewing of the manuscript. According to the International Committee of Medical Journal Editors (ICMJE): “Conflict of interest exists when an author (or the author’s institution) has financial (employment, consultancies, stock ownership, honoraria and paid expert testimony) or personal relationship, academic competition or intellectual passion that inappropriately influences his actions.” (available at: http://www.icmje.org/conflicts-of-interest/).

Open-access

Socijalna psihijatrija is an open-access journal, and all its content is free and available at the Journal’s webpage.

Article processing charges

The translation or language editing of the manuscript from Croatian to English (and *vice versa*) is funded by authors.

Manuscript preparation

Manuscripts, figures and tables should be submitted in electronic form. Normally, manuscripts should be no longer than 20 standard pages (one standard page is 1800 keystrokes – characters with spaces). Texts should be written in Microsoft Word, in a continuous font and style: the one set under the Normal style, with no additional font effects used other than words that should be in bold or italic. Tittles should be written in the same font as the rest of the text (Normal style) in a separate row, and title hierarchy should be shown using numbers (e.g. 1., 1.1., 1.1.1., etc.).

There should be a title, name and surname, address, town, state and e-mail indicated for the corresponding author.

The title page should contain: the full and shortened title of the article, full names and full surnames of all authors of the article, and the institution they work for. All the authors should also provide an ORCHID ID (please check the following website: https://orcid.org/register). The article should have a summary not exceeding 200 words. The summary should briefly describe the topic and aim, the methods, main results,

Cilj je kratak opis što se namjerava istraživati, tj. što je svrha istraživanja.

Metode se prikazuju tako da se čitatelju omogući ponavljanje opisanog istraživanja. Metode poznate iz literature ne opisuju se, već se navode izvorni literaturni podatci. Ako se navode lijekovi, rabe se njihova generička imena (u zagradi se može navesti njihovo tvorničko ime).

Rasprava sadrži tumačenje dobivenih rezultata i njihovu usporedbu s rezultatima drugih istraživača i postojećim spoznajama na tom području.U raspravi treba objasniti važnost dobivenih rezultata i njihova ograničenja, uključujući i implikacije vezane uz buduća istraživanja, ali uz izbjegavanje izjava i zaključaka koji nisu potpuno potvrđeni dobivenim rezultatima.

Zaključci trebaju odgovarati postavljenom cilju istraživanja i temeljiti se na vlastitim rezultatima.

Tablice treba smjestiti unutar Word-dokumenta na kraju teksta, a označiti mjesto njihovog pojavljivanja u tekstu. Ako se tablica daje u formatu slike (tj. nije izrađena u Wordu), za nju vrijede upute kao za slike. Svaka tablica treba imati redni broj i naslov.

Slike treba priložiti kao posebni dokument u .tiff ili .jpg (.jpeg) formatu, minimalne rezolucije 300 dpi. Uz redni broj svaka slika treba imati legendu. Reprodukciju slika i tablica iz drugih izvora treba popratiti dopuštenjem njihova autora i izdavača.

Rad može sadržavati i zahvalu na kraju teksta.

U tekstu se literaturni podatak navodi arapskim brojem u zagradi.

Literatura

Časopis *Socijalna psihijatrija* usvojila je Vancouverski stil citiranja literature, prema standardima ICMJE koji preporučuju citiranje djela objavljena u cijelosti, odnosno ona koja su javno dostupna, što ujedno znači da treba izbjegavati navođenje sažetaka, usmenih priopćenja i sl.

Ponovno citiranje nekog rada treba označiti istim brojem pod kojim je prvi put spomenut.

Prigodom doslovnog navođenja izvatka iz drugog teksta koriste se navodnici. Ovaj način citiranja treba koristiti samo u slučajevima kada se informacija ne može kvalitetno preformulirati ili sažeti (npr. kod navođenja definicija).

Sekundarno citiranje odnosi se na slučaj kada autor koristi navod iz djela kojemu nema pristup, već je do navoda došao posredstvom drugog rada u kojem je izvorni rad citiran. Ovaj način citiranja treba izbjegavati gdje god je to moguće, odnosno uvijek treba pokušati pronaći izvorno djelo. Ako to nije moguće, u popisu literature se navodi rad koji je zaista korišten, a ne rad u kojem je informacija primarno objavljena.

1. Autori

Ako djelo ima šest autora, navode se svi autori. Ako djelo ima više od šest autora, navodi ih se prvih šest, a ostali se označavaju kraticom *et al.* ili *i sur.* Prvo se navodi prezime, a potom inicijali imena. Više inicijala imena iste osobe piše se bez razmaka.

2. Naslov i podnaslov rada

Prepisuju se iz izvornika i međusobno odvajaju dvotočkom. Samo prva riječ naslova i vlastita imena (osobna, zemljopisna i dr.) pišu se velikim početnim slovom.

3. Naslov časopisa

Naslovi časopisa skraćuju se sukladno sustavu koji koristi MEDLINE (popis kratica dostupan je na adresi: http://www.ncbi.nlm.nih.gov/nlmcatalog/journals). Naslov časopisa se ne skraćuje ako se on ne nalazi na prethodno navedenom popisu kratica.

4. Numerički podatci o časopisu

Arapskim brojkama upisuju se podatci koje se može pronaći u samom izvorniku ili u nekoj bibliografskoj bazi podataka i to sljedećim redom: godina, volumen ili svezak, sveščić ili broj (engleski *issue* ili *number* – no.), dio (engleski *part*), dodatak (engleski *supplement* ili *suppl.*),

and conclusion. The summary should be followed by 3 to 5 key words for easy identification and classification of the content of the article.

Original scientific and professional papers should be arranged into sections as follows: summary, introduction, aim, methods, results, discussion and conclusion.

The Introduction section is a short and clear overview; it briefly mention Authors involved with the research of the paper.

The Aim section briefly describes the goals and intentions of the research, i.e. the point of the research.

The Methods section should be presented in such way as to allow the reader to replicate them without further explanation. Methods known from the literature need not be described but should simply be referred to by their generic names (trade names should be given in parentheses).

The Discussion section includes the results and their comparison with the results of other researchers and well known scientific knowledge in that area. It should also explain the significance of the results and their limitations, including implications regarding future studies, statements and conclusions that are not verified by the results should be avoided.

The Conclusions section should correspond to the aim of the study and be based on its results.

Tables should be placed at the end of the text in the Word document and with an indication where they are to appear in the published article. If the table is submitted as an image (i.e. is not constructed in Microsoft Word), the same instructions as for images apply.

Images should be submitted separately in .tiff or .jpg (.jpeg) format, with a minimum resolution of 300 dpi. Every image should have a number and caption. Reproduction of images and tables from other sources should be accompanied by a full reference and authorization by their Authors and Publisher.

The manuscript may have an acknowledgement at the end of the text.

References should be written with Arabic numerals in parentheses.

References

Socijalna psihijatrija applies the Vancouver referencing style according to the International Committee (ICMJE) standards. ICMJE recommends citation of the complete manuscripts, i.e. publicly accessible manuscripts, meaning that summaries, announces, etc. should be avoid.

Repeated citing of a manuscript should be marked by the same number as when it is mentioned for the first time.

Quotation marks should be used when citing another text. This mode of citation should only be used when the information cannot be properly reformulated or summarized (e.g. when referring to a definition).

Secondary citations refer to cases when Authors quote a passage from an inaccessible work to using a different text than the one where the quote originated. This kind of quotation should be avoided as much as possible i.e. always try to find the original scientific manuscript. In cases when it is not possible, the manuscript should cite the work that was used and not the work in which the information was primarily published.

1. Authors

In case the manuscript has six or fewer Authors, all of them should be listed. Should the manuscript have more than six Authors, the first six should be listed and the rest of them marked with the abbreviation *et al.* or i sur. First list the surname and then the initials of the first name(s). Multiple initials for the same person should be written without spaces.

2. Title and subtitle

Titles and subtitles are copied from the original and separated by a colon. Only the first word of the title and name are written in capital letters.

3. Journal title

Journal titles are shortened according to the MEDLINE system (a list of abbreviations is available at: http://www.ncbi.nlm.nih.gov/nlmcatalog/journals). The title of the journal is not shortened if fit is not found in the abovementioned shortcut list.

stranice (engleski *pages*). Broj sveščića upisuje se u okruglu zagradu, a obvezno ga je upisati ako paginacija (numeracija) svakog sveščića počinje od 1. Ako ne možete prepoznati broj/sveščić časopisa (primjerice, kad su sveščići uvezani), taj se podatak može izostaviti. Stranice rada se upisuju od prve do zadnje.

Primjer:

Kingdon DG, Aschroft K, Bhandari B, Gleeson S, Warikoo N, Symons M et al. Schizophrenia and borderline personality disorder: similarities and differences in the experience of auditory hallucinations, paranoia and childhood trauma. J Nerv Ment Dis 2010; 10(6): 399-403.

5. Izdanje knjige

Navodi se rednim brojem i kraticom izd. Rednom broju sveska knjige (ako je djelo u više svezaka) prethodi oznaka sv.

6. Grad izdanja

Upisuje se prvi grad naveden u izvorniku, za sve ostale se dodaje itd. (engleski *etc.*).

7. Izdavač

Prepisuje se iz izvornika.

8. Godina izdanja

Prepisuje se s naslovne stranice, a ako nije navedena godina izdanja, bilježi se godina copyright-a © koja se često nalazi na poleđini naslovne stranice.

Primjer:

Kring AM, Johnson SL, Davison GC, Neale JM. Abnormal Psychology. New York: Wiley, 2013.

9. Poglavlje u knjizi

Opisuje se prvo autorima i naslovom poglavlja, nakon čega slijede podatci o knjizi. Ispred navođenja urednika knjige stavlja se riječ u: (engleski *in:*), a iza u okrugloj zagradi ur. (engleski *ed.*)

Primjer:

Millon T. Brief History of Psychopathology. In: Blaney PH, Millon T (eds.) Oxford Textbook of Psychopathology. New York: Oxford University Press, 2009.

10. Stranica knjige

Navode se samo ako se citira dio knjige, uz oznaku str. (engleski *pages*).

Primjer:

Mimica N. Delirij. U: Begić D, Jukić V, Medved V. (ur.). Psihijatrija. Zagreb: Medicinska naklada, 2015, str. 84-86.

11. URL/Web adresa

Obavezno se navodi za mrežne izvore.

12. Datum korištenja/pristupa

Obavezno se navodi za mrežne izvore.

13. DOI

Ako postoji, obavezno se navodi za mrežne izvore.

Primjer:

Cook A, Spinazzola J, Ford J, Lanktree C, Blaustein M, Cloitre M, DeRosa R, Hubbard R, Kagen R, Liautaud J, Mallah K, Olafson E,van der Kolk B. Complex trauma in children and adolescents. Psych Ann 2005; 35(5): 390-398. Preuzeto 14. listopada 2017. shttps://doi.org/10.3928/00485713-20050501-05.

4. Numerical journal data

The data that can be found in the original or in any of the bibliographic database should be written in Arabic numerals, in the following order: year, volume, issue, part, supplement, pages. Issue number is entered in parentheses and it is required to enter it starting from 1. In case the issue of the Journal cannot be recognized (e.g. when the issues are bonded), that data may be omitted. The page numbers are written from first to last.

E. g.

Kingdon DG, Aschroft K, Bhandari B, Gleeson S,Warikoo N, Symons Metal. Schizophrenia and borderline personality disorder: similarities and differences in the experience of auditory hallucinations, paranoia and childhood trauma. J Nerv Ment Dis 2010; 10(6): 399-403.

5. Book issue

Book issue is indicated by the ordinary number and the abbreviation “Ed”. In case the book has more than one volume, use the abbreviation “Vol”.

6. City of issue

Insert only the first city from the original work. For every additional city, use the abbreviation etc.

7. Publisher

Copy from the original.

8. Year of issue

Copy it from the main page. In case the year is not indicated, the copyright year should be written (it can be found at the end of the book).

E.g.

Kring AM, Johnson SL, Davison GC, Neale JM. Abnormal Psychology. New York: Wiley, 2013.

9. Book chapter

Book chapter should list the authors and title followed by book data. Use the abbreviation “In” before the Editor’s name:

E. g.

Millon T. Brief History of Psychopathology. In: Blaney PH, Millon T (eds.) Oxford Textbook of Psychopathology. New York: Oxford University Press, 2009.

10. Book page

Book pages are marked with “pages” only if a part of the book is being quoted:

E. g.

Mimica N. Delirij. U: Begić D, Jukić V, Medved V. (ur.). Psihijatrija. Zagreb: Medicinska naklada, 2015, pages: 84-86.

11. Web address

Required for online resources.

12. Date of use

Required for online resources.

13. DOI

If available, it is mandatory to cite online resources.

E. g.

Cook A, Spinazzola J, Ford J, Lanktree C, Blaustein M, Cloitre M, et al. Complex trauma in children and adolescents. Psych Ann 2005; 35(5): 390-398. Accesed 14. October 2017. https://doi.org/10.3928/00485713-20050501-05.