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EFEKAT BAZIČNE TERAPIJE PARODONTOPATIJE NA KVALITET ŽIVOTA PACIJENATA STARIJE ŽIVOTNE DOBI

THE IMPACT OF BASIC PERIODONTAL THERAPY ON THE QUALITY OF LIFE OF ELDERLY PEOPLE

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Sažetak

Uvod: Kvalitet života u vezi sa oralnim zdravljem je važna mera bolesti i samih ishoda terapijskih intervencija. Parodontopatija je inflamatorno oboljenje koje je povezano sa opštim stanjem pacijenta i negativno utiče na kvalitet života.

Cilj ovog istraživanja bio je da se ispita efekat bazične terapije parodontopatije na kvalitet života kod pacijenata starijeg doba sa hroničnom parodontopatijom.

Materijali i metode: Pacijenti sa parodontopatijom nasumice su raspoređeni u studijsku grupu (n=44) kod kojih je sprovedena bazična terapija, i kontrolnu grupu (n=44), koja nije primila nikakav tretman. Protokol je uključivao popunjavanje upitnika OHIP-14, pre i mesec dana posle tretmana, klinički pregled i bazičnu terapiju parodontopatije. Pacijenti su popunili i dodatna pitanja o zdravlju gingive kao i uticaju parodontopatije na kvalitet života.

Rezultati: Rezultati kliničkih parodontalnih parametara nisu pokazali signifikantnu razliku među grupama na početku ispitivanja. Na kontroli je zabeleženo poboljšanje svih kliničkih parametara i signifikantna razlika između ispitivanih grupa (p<0,05), kao i u tretiranoj grupi pre i posle tretmana (p<0,001). Statistički značajne promene (p<0,001) u tretiranoj grupi zabeležene su za impakciju hrane, izbegavanje unosa određene vrste hrane, loš zadah, izbegavanje smejanja i prisustvo apscesa. Zdravlje gingive ocenjeno je sa „loše“ ili „veoma loše“ kod 42,73% ispitanika. Uticaj parodontopatije na svakodnevne aktivnosti kod pacijenata izražen je sa „često“ ili „uvek“ kada se smatralo da imaju najčešće probleme vezane za ove aktivnosti.

Zaključak: Bazična terapija parodontopatije značajno je uticala na kvalitet života pacijenata starijeg doba sa hroničnom parodontopatijom. Utvrđene su značajne razlike između odgovora pre i posle tretmana. U ovoj studiji uočen je prihvaćeni stepen svesti o problemima oralnog zdravlja u vezi sa parodontalnom bolešću kod pacijenata starijeg doba.

Ključne reči: starije osobe, parodontopatija, kvalitet života, OHIP

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Abstract

Introduction: The quality of life related to oral health is an important measure of the disease and the outcome of therapeutic interventions. Periodontitis is an inflammatory disease that is associated with the general state of the patient's organism and negatively affects the quality of life.

The aim of this study was to examine the effect of basic periodontal therapy on the quality of life in elderly patients with periodontitis.

Materials and methods: A total of 88 patients with periodontitis were randomly assigned to the group (n=44) who underwent basic therapy, while the control group (n=44) did not receive any treatment. The protocol included filling out a questionnaire OHIP-14 prior to and one month after the treatment, clinical examination and basic periodontal therapy. Patients also filled up additional questions about the gingival health as well as the impact of periodontal disease on the quality of life.

Results: Clinical periodontal parameters did not show a significant difference between the groups at the beginning of the study. Improvement of all clinical parameters showing the periodontium state and a significant difference between the investigated groups (p<0.05), as well as in the treated group before and after treatment (p<0.001) was noted at the checkup. Statistically significant changes (p<0.001) like food impaction, avoiding the intake of certain foods, bad breath, avoiding laughing, and the presence of an abscess were recorded mainly in the treated group. Gingival health was rated "bad" or "very bad" with 42.73% of respondents. The impact of periodontitis on everyday activities is expressed by a simple questionnaire. All patients who answered "often" or "always" were considered to have the most common problems associated with these activities.

Conclusion: The basic periodontal therapy has significantly affected the quality of life in elderly patients with periodontitis. Significant differences between the responses before and after treatment were identified.

Key words: elderly people, periodontitis, quality of life, OHIP

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Uvod

Hronična parodontopatija (HP) je inflamatorno oboljenje koje negativno utiče na estetiku, mastikatorne i govorne funkcije pojedinaca^{1,2}. To je multifaktorijalna bolest koja je modifikovana imunološkim, mikrobnim, genetskim i faktorima rizika iz životne sredine, koji na kraju određuju ozbiljnost kliničke slike oboljenja. Kako je parodontopatija u početnim fazama asimptomatska, pacijenti mogu biti nesvesni njihovog kliničkog statusa parodonta^{3,5} i ne primećivati ono što je potrebno za lečenje⁶. Sa razvojem oboljenja, javljaju se znakovi i simptomi koji su vidljivi i pacijentima, kao što je krvarenje, labavljenje i migracija zuba, bol kod komplikacija, problem u ishrani, nelagodnost u interdentalnim prostorima, itd.^{7,8}

Težina parodontalnog oboljenja dokumentuje se kliničkim parametrima kao što su prisustvo plaka, kamenca i konkremenata, krvarenje, dubina parodontalnih džepova i nivo pripojnog epitela⁹. Drugi simptomi parodontalnog oboljenja, koji mnogo više pacijentima zaokupljaju pažnju, a posledice su hronične upale i razaranja tkiva zuba, uključuju crvenilo i otok gingive, krvarenje pri četkanju, labavljenje zuba i loš zadah. Ovakvi simptomi su veoma relevantni sa stanovišta pacijenata i odražavaju se negativno na njihov kvalitet života¹⁰.

U poslednjih dvadesetak godina, zadovoljstvo pacijenata i njihov kvalitet života se sve više uzima u obzir kao važan ishod stomatološke terapije. Kvalitet života opisan je kao multidimenzionalni koncept terapije, koji uključuje fizičke, emocionalne, socijalne i druge faktore¹¹⁻¹³. Fazekas¹⁴ je podržao koncept potpune brige o pacijentu: ne treba samo gledati na primarno oboljenje i raditi samo osnovni tretman i prevenciju istog, već sagledati pacijenta generalno, što znači pratiti i fizičke, psihološke i socijalne aspekte bolesti i poremećaja. Reisine i Miller¹⁵ i Adulyanon i sar.¹⁶ opisali su da oralni simptomi, koji se odnose na probleme sa ishranom, govorom, interakcijom i emocionalnim i psihološkim funkcijama, kao i ideja da nelagodnost, invalidnost i oralno oštećenje utiču na kvalitet života.

Ova pažnja je dovela do razvoja različitih tipova upitnika koji mere aspekte kvaliteta života pacijenata. Percepcija kvaliteta života u vezi sa oralnim zdravljem (OHRKOL) prikazana je u velikom broju istraživanja¹⁷⁻²². Visoka validnost sadržaja za merenje uticaja tretmana na reakciju pacijentovog kvaliteta života posebno je uočena u upitniku OHIP-14.

Introduction

Chronic periodontitis (CP) is an inflammatory disease that negatively affects the aesthetics, mastication and speech functions of individuals^{1,2}. It is a multifactorial disease that is modified by immunological, microbial, genetic, and environmental risk factors, which ultimately determine the severity of the clinical picture of the disease. As periodontitis is at the initial stages asymptomatic, patients may be unaware of their clinical status of periodontal disease^{3,4,5} and do not notice what is needed for the treatment⁶. As the disease progresses, signs and symptoms such as bleeding, loosening and tooth migration, eating disorders and discomfort in interdental spaces are clearly obvious and visible by the patients^{7,8}.

The seriousness of the periodontal disease is documented by clinical parameters such as the presence of plaque, calculi, and concretions, bleeding, the depth of periodontal pockets, and the level of the adherent epithelial cells⁹. Patients are more concerned about other symptoms such as redness and gingival enlargement, bleeding, loosening and bad breath which are the consequences of chronic inflammation and destruction of tooth tissue. These symptoms are very relevant from the patient's point of view and reflect negatively on their quality of life¹⁰.

Over the past twenty years, patient satisfaction and their quality of life have been increasingly taken into account as an important outcome of dental therapy. The quality of life is described as a multi-dimensional concept of therapy that includes physical, emotional, social and other factors^{11,12,13}. Fazekas¹⁴ supported the concept of total patient care: it is not just necessary to look at the primary disease and to work only on the basic treatment and prevention but to look at the patient in general, which means monitoring the physical, psychological and social aspects of the disease and disorder. Reisine, Miller¹⁵ and Adulyanon et al.¹⁶ described that oral symptoms, related to nutritional problems, speech, interaction, and emotional and psychological functions, as well as the idea of discomfort, disability and oral damage, affect the quality of life.

This attention has led to the development of different types of questionnaires that measure aspects of patients' quality of life. Perception of oral health related to the quality

OHIP-14 je kraća verzija upitnika o oralnom zdravlju i ima dobru pouzdanost, validnost i preciznost, što je potvrđeno od strane Sladea²³. Dosta se koristi za upoređivanje razlika pre i posle terapije različitih stomatoloških problema^{20,24-33}. Rezultati ranijih istraživanja o uticaju parodontalnog tretmana na kvalitet života u vezi sa oralnim zdravljem pokazali su poboljšanja kod pacijenata, posebno za bol, jelo i žvakanje, kao i psihološku funkciju³¹.

Kvalitet života u vezi sa oralnim zdravljem je važna mera ishoda bolesti i terapijskih intervencija, koja se odražava na zadovoljstvo pacijenta u odnosu na specifične domene života³⁴⁻³⁶. Nekoliko studija je dokumentovalo da nelečena hronična parodontopatija ima negativan uticaj na kvalitet života u vezi sa oralnim zdravljem³⁷⁻⁴³.

Dokazano je da je bazična terapija efikasna u lečenju parodontalnih bolesti⁴⁴⁻⁴⁶. Rezultati istraživanja pokazali su pozitivan uticaj na kvalitet života nakon ove terapije parodontalnog oboljenja^{47,48}. Rezultati istraživanja Shanbhag i sar.⁴⁹ pokazali su da, bazična terapija, kao jedna od varijanti lečenja ovog oboljenja, ima uticaja na OHRKoL i zaključeno je da može poboljšati kvalitet života kod osoba sa hroničnom parodontopatijom.

Parodontopatija kod starijih osoba utiče na način ishrane, kao i na izbor hrane, komunikaciju i izgled, smanjujući njihov kvalitet života. Problemi sa oralnim zdravljem kod starijih osoba mogu uticati na njihovu percepciju za dobro oralno stanje, kao i na njihovo socijalno i fizičko funkcionisanje. Gubitak pojedinih ili svih zuba, migracija i labavljenje istih, slabija oralna higijena, unos mekše i kašaste hrane, kao i prisustvo raznih sistemskih stanja, može značajno uticati na kvalitet života starijih osoba.

Stoga, ovo istraživanje ima za cilj da proceni uticaj bazične terapije parodontopatije na kvalitet života kod starijih pacijenata korišćenjem OHIP-14 upitnika. Samoocenjivanje kvaliteta života vezanog za oralno zdravlje bilo je povezano sa karakteristikama parodonta i kliničkim parametrima zabeleženih kod učesnika ovog istraživanja.

of life (OHQOL-UK) was shown in a large number of studies¹⁷⁻²². The high validity of the content for measuring the impact of treatment on the patient's quality of life response is particularly noticeable in the OHIP-14 questionnaire. OHIP-14 is a shorter version of the oral health questionnaire, and OHIP-14 is reliable, valid and accurate, as confirmed by Slade²³. It is used to compare differences before and after the treatment of various dental problems^{20,24-33}. The results of earlier studies on the impact of periodontal treatment on the oral health-related quality of life have shown improvement in patients, especially regarding the pain, eating and chewing, as well as psychological function³¹.

The quality of life related to oral health is an important measure of the outcome of the disease and therapeutic interventions, which reflects the patient's satisfaction with specific aspects of life³⁴⁻³⁶. Several studies have documented that unspecified chronic periodontitis has a negative impact on the oral health-related quality of life³⁷⁻⁴³.

Basic periodontal therapy has been shown to be effective in the treatment of periodontal disease⁴⁴⁻⁴⁶. The results of the study showed a positive impact on the quality of life after this treatment of periodontal disease^{47,48}. Research results by Shanbhag et al. have shown that basic therapy, as one of the variants of treatment for this disease, has an impact on OHQoL-UK and it has been concluded that it can improve the quality of life in people with chronic periodontitis⁴⁹.

Periodontal disease in elderly affects the way of eating, as well as the choice of food, communication, and appearance, reducing their quality of life. Oral health problems in the elderly can affect their perception of a good oral state, as well as their social and physical functioning. The loss of some or all of the teeth, migration and loosening, poor oral hygiene, the intake of softer and mushy foods, as well as the presence of various systemic conditions can also affect the quality of life of elderly.

Therefore, this research aims to evaluate the effect of basic periodontal therapy on the quality of life in elderly patients using OHIP-14 questionnaires. Self-assessment of the quality of life associated with oral health was associated with the periodontal characteristics and clinical parameters recorded in participants of this study.

Materijal i metode

Ovo prospektivno istraživanje rađeno je u Službi za parodontologiju i oralnu medicinu Klinike za stomatologiju Medicinskog fakulteta u Nišu. Odobreno je od strane Etičkog odbora Klinike (br.20/6-2018-2EO). Istraživanje je trajalo 9 meseci (od 01.02. do 30.10. 2018.godine).

Pacijenti sa hroničnom parodontopatijom, koji su došli u Službu za parodontologiju Klinike za stomatologiju radi terapije parodontalnog oboljenja, nasumice su birani za ovu studiju. Svi eventualni učesnici studije upoznati su sa prirodom istraživanja i nakon usmenog pristanka, potpisali su i informativnu saglasnost pre početka tretmana. Kriterijumi za uključivanje u istraživanje bili su: (I) osobe od 60-65 godina starosti; (II) osobe sa hroničnom parodontopatijom i (III) osobe koje imaju najmanje 12 zuba. Kriterijumi isključivanja iz istraživanja su: (I) osobe kojima je rađen parodontalni tretman u proteklih 6 meseci; (II) osobe koje su bile na antibiotskoj terapiji iz bilo kog razloga unazad 6 meseci (III), osobe na terapiji sistemskim ili topikalnim nesteroidnim antiinflamatornim lekovima i (IV) mentalno hendikepirane osobe.

Odabrani učesnici (ukupno 88 pacijenata) podeljeni su u dve grupe: ispitivanu (44) i kontrolnu grupu (44). Anamnezom su prikupljeni demografski podaci učesnika, dok je kliničkim pregledom određeno stanje parodonta kod svih pacijenata.

Standardna oprema za klinički pregled sastojala se od stomatološke stolice sa veštačkom svetlošću, parodontalne sonde i stomatološkog ogledalceta. Za dijagnozu je korišćen i rendgenski snimak kada je to bilo potrebno. Klinički pregled obavio je jedan klinički lekar. Pre kliničkog pregleda, svi pacijenti popunili su OHIP-14 upitnik i modifikovan upitnik o samoproceni stanja parodonta. U okviru kliničkog pregleda određivani su parodontalni parametri uključujući prisustvo mekih naslaga (Pli), prisustvo inflamacije gingive (Gi, Ikrv), dubina parodontalnih džepova (PPD) i gubitak kliničkog pripoja (CAL) koristeći Villiams parodontalnu sondu (Hu-Friedi, Čikago SAD).

Material and methods

This prospective study was conducted in the Department of Periodontology and Oral Medicine of the Dentistry Clinic at the Faculty of Medicine in Niš. Approved by the Ethics Committee of the Clinic (No:20/6-2018-2EO). The research lasted for a period of 9 months (from February 1st to October 30th, 2018).

Patients with chronic periodontitis who came to the Periodontology Department of the Dentistry Clinic for the treatment of periodontal disease were randomly selected for this study. All potential participants of the study were familiar with the nature of the research and after the vocal consent, they also signed the informative consent before the beginning of the treatment. Criteria for inclusion in the research were: (I) 60-65 years old; (II) persons with chronic periodontitis; and (III) persons with at least 12 teeth. Criteria for exclusion from the study were: (I) persons who have undergone periodontal treatment over the past 6 months; (II) persons who have been on antibiotic therapy for any reason back for 6 months (III), persons on therapy with systemic or topical non-steroidal anti-inflammatory drugs; and (IV) mentally handicapped persons.

The selected participants (a total of 88 patients) were divided into two groups: the examined (44 of them) and the control group (44 of them). Demographic data of the participants were collected by anamnesis, while the clinical examination determined the periodontal state in all patients.

The standard equipment for clinical examination consisted of a dental chair with artificial light, a periodontal probe, and a dental mirror. An X-ray was used for diagnosis when needed. A clinical examination was performed by a clinical doctor. Before the clinical examination, all patients completed the OHIP-14 questionnaire and a modified questionnaire on self-assessment of the periodontal condition. Within the clinical examination, periodontal parameters including the dental plaque index (Pli), gingivitis (Gi, Ikrv), the depth of periodontal pockets (PPD), and clinical attachment loss (CAL) were determined using the Williams periodontal probe (Hu-Friedi, Chicago USA).

The clinical diagnosis of periodontal health was obtained on the basis of certain

Klinička dijagnoza zdravlja parodonta dobijena je na osnovu određenih kliničkih parametara učesnika istraživanja. Za klasifikaciju oboljenja korišćena je klasifikacija Američke akademije za parodontologiju (AAP) za parodontalno oboljenje⁵⁰. Prema njoj, sve forme oboljenja evidentirane su kao: umerena parodontopatija (sa parodontalnim džepovima ≤ 5 mm) i teška parodontopatija (sa parodontalnim džepovima > 5 mm).

Svi učesnici dobili su instrukcije o održavanju oralne higijene, koje su obuhvatile upotrebu četkice za zube, interdentalne četkice i zubnog konca, odgovorajuću tehniku pranja zuba (modifikovana bas tehnika), i savet za upotrebu 0,12% hlorheksidina za ispiranje usne duplje. Pacijentima iz ispitivane grupe odrađena je bazična terapija u okviru koje su uklonjene meke i čvrste naslage od strane jednog lekara uz upotrebu ultrazvučnog skalera (WOODPECKER) i Gracyevih kireta (Hu-Friedi, Chicago, IL, SAD) za uklanjanje nekrotičnog cementa i detritusa iz parodontalnog džepa. Pacijentima kontrolne grupe odrađen je klinički pregled stanja.

Nakon mesec dana, izvršena je kontrolna poseta gde je odrađena remotivacija i profesionalna profilaksa učesnicima istraživanja.

Kvalitet života u vezi sa oralnim zdravljem određivanje korišćenjem upitnika „Oral Health Impact Profile-14 (OHIP-14)“, kraća verzija⁵¹. Upitnik se sastojao od 14 pitanja podeljenih na 7 delova: funkcionalna ograničenja, fizički bol, psihološka nelagodnost, fizička nesposobnost, psihološka invalidnost, socijalna nesposobnost i hendikep. Učesnicima je jedan lekar čitao pitanja iz upitnika i dodatno objašnjavao ukoliko je bilo potrebe za tim, a pacijenti su usmeno odgovarali na osnovu skalesa odgovorima (uopšte ne-0, retko-1, često-2, veoma često-3, konstantno-4). Maksimalni broj poena je 52 i to je ukupan OHIP rezultat koji predstavlja zbir svih pojedinačnih bodova za 14 pitanja, tako da je računato da je uticaj oralnog stanja na kvalitet života bio lošiji sa većom vrednošću sabranih poena. Pacijenti obe grupe na upitnike su odgovarali dva puta: pre tretmana i mesec dana kasnije, na kontrolnom pregledu.

Pored OHIP-14 upitnika, korišćen je i modifikovan upitnik koji su koristili Cunha-cruz i sar. u studiji sprovedenoj 2007. godine⁵². Ovaj upitnik je obuhvatio opšte informacije o polu, starosti, sistemskim bolestima, pušenju, kao i pitanja koja su se reflektovala na samoprocenu zdravlja gingive, na procenu efekta prisustva parodontalnog oboljenja na svakodnevne životne aktivnosti.

clinical parameters of the participants of the study. For the classification of the disease, the classification of the American Academy of Periodontology (AAP) for the periodontal disease was used⁵⁰. According to it, all forms of illness were recorded as moderate periodontitis (periodontal pockets ≤ 5 mm) and severe periodontal disease (periodontal pockets > 5 mm).

All participants received instructions on maintaining oral hygiene, which included the use of a toothbrush, interdental brushes and dental floss, appropriate tooth brushing technique, and advice for using 0.12% chlorhexidine to rinse the oral cavity. Patients from the investigated group undergone basic therapy in which dental plaque and tartar were removed by a single doctor using the ultrasonic scaler (WOODPECKER) and Gracey's curette (Hu-Friedi, Chicago, IL, USA) for the removal of necrotic cement and detritus from a periodontal pocket. The clinical checkup was made to the patients of the control group.

After a month, a control checkup was conducted where remotivation and professional prophylaxis was given to the participants of the research.

The oral health-related quality of life was determined using the questionnaire "Oral Health Impact Profile-14 (OHIP-14)", shorter version⁵¹. The questionnaire consisted of 14 questions divided into 7 parts: functional limitations, physical pain, psychological discomfort, physical incapacity, psychological disability, social incapacity, and handicap. The doctor read questions from the questionnaire and gave further explanations if there was a need, and the patients responded on the basis of a response scale (not at all -0, rarely - 1, often - 2, very often - 3, all the time - 4). The maximum number of points is 52 and that is the total OHIP score that represents the sum of all individual points for 14 questions, so it is calculated that the impact of the oral state on the quality of life was worse with a higher value of the points collected. The patients of both groups answered the questionnaires two times: before the treatment and a month later, on a control checkup.

In addition to the OHIP-14 questionnaires, a modified questionnaire was also used, which was used by Cunha-Cruz et al. in a study conducted in 2007⁵². This questionnaire covered general information on sex, age, systemic illness, smoking, as well as the issues that reflected on the self-assessment of gingival health, to assess the effect of the periodontal disease on everyday life activities.

Statistička analiza

Svi podaci su uneti i analizirani korišćenjem programskog paketa za Windows SPSS verzije 20. Numeričke varijable su opisane kao srednja vrednost i standardna devijacija (mean±SD) i kategoričke varijable sa frekvencom i procentom. Asocijacija uparenih kategoričkih podataka procenjena je Cochran-ovim K testom . Korišćena je ANOVA za ponovljene mere da bi se testirale razlike u sredinama i unutar grupe. Nivo značajnosti je na nivou od $p < 0,05$.

Rezultati

U istraživanju je ukupno učestvovalo 88 ispitanika, od toga 47 (53,41%) muškaraca i 41 (46,59%) osoba ženskog pola u obe grupe (I-15 žena i 29 muškaraca; K-26 žena i 18 muškaraca). Najveća distribucija učesnika, za obe grupe, uočena je u visokom obrazovanju (55,68%), nešto manje u srednjem (36,36%), dok je najmanji procenat učesnika bio samo sa osnovnom školom (7,96%). Većina učesnika su bili nepušači (73,86%) i osobe koje ne konzumiraju alkohol (67,05%), a 55,68% ispitanika je imalo ekonomski status koji je bio dovoljan za svakodnevni život. Prosečna starost je bila $63,27 \pm 6,67$ godine za obe grupe, sa prevalencijom osoba koje nemaju sistemsko oboljenje (61,36%). Nije bilo značajne razlike ovih demografskih podataka između ispitivane i kontrolne grupe ($p < 0,05$) (Tabela 1).

Na početku istraživanja, klinički parodontalni parametri (Pli, Gi, Ikrv, PPD i CAL) nisu pokazali signifikantnu razliku među grupama. Mesec dana kasnije, na kontrolnom pregledu, zabeleženo je poboljšanje svih kliničkih parametara koji prikazuju stanje parodonta i signifikantnu razliku između grupa ($p < 0,001$), kao i u ispitivanoj grupi pre i posle tretmana (Tabela 2).

U tabeli 3 zabeležene su sve promene iz upitnika pre i mesec dana nakon tretmana za učesnike i ispitivane i kontrolne grupe. Većina stavki pokazale su delimično smanjenje tegoba. Statistički značajne promene ($p < 0,001$), uglavnom u ispitivanoj grupi zabeležene su za impakciju hrane, izbegavanje unosa određene vrste hrane, loš zadah, izbegavanje smejanja i prisustvo apscesa.

Statistical analysis

All data are entered and analyzed using a software package for Windows SPSS version 20. Numerical variables are described as mean and standard deviation (mean \pm SD) and categorical variables with frequency and percentage. Association of paired categorical data is evaluated by Cochran's K test. ANOVA was used for repeated measures to test the differences in the environment and within the group. The significance level is at level $p < 0.05$.

Results

The survey involved a total of 88 respondents, of whom 47 (53.41%) men and 41 (46.59%) women in both groups (T-15 women and 29 men, C-26 women and 18 men). The largest distribution of participants for both groups was observed with participants with a college degree (55.68%), slightly less with high school (36.36%), while the smallest percentage of participants was only with elementary school (7.96%). Most participants were nonsmokers (73.86%) and people who do not consume alcohol (67.05%), and 55.68% of respondents had an economic status that was sufficient for everyday life. The mean age was 63.27 ± 6.67 years for both groups, with the prevalence of persons without systemic disease (61.36%). There was no significant difference between these demographic data between the investigated and the control group ($p < 0.05$) (Table 1).

At the beginning of the study, clinical periodontal parameters (Pli, Gi, Ikrv, PPD, and CAL) showed no significant difference between the groups. A month later, during a checkup, an improvement of all clinical parameters was demonstrated, showing the periodontal condition and a significant difference between the groups ($p < 0.001$), as well as in the examined group before and after treatment (Table 2).

In Table 3, all changes from the questionnaire were recorded before and a month after the treatment for participants from the examined and control group. Most of the parameters showed a partial reduction in the symptoms. Statistically significant changes ($p < 0.001$), mainly in the examined group, were recorded for food impaction, avoiding the intake of certain foods, bad breath, avoiding laughing, and the presence of an abscess.

Tabela 1. Demografske karakteristike učesnika
Table 1. Demographic characteristics of participants

	Sa bazičnom terapijom n (%) With basic therapy n (%)	Bez bazične terapije n (%) Without basic therapy n (%)	p vredn p value
Pol / Gender			*p< 0,05
Muški / Male	29 (65.91%)	18 (40.91%)	
Ženski / Female	15 (34.09%)	26 (59.09%)	
Edukacija / Education			*p< 0,05
Osnovno / Primary	3 (06.82%)	4 (09.09%)	
Srednje / High	14 (31.82%)	18 (40.91%)	
Visoko // College	27 (61.36%)	22 (50.00%)	
Pušenje / Smoking			*p< 0,05
Pušač / Smoker	8 (18.18%)	15 (34.09%)	
Nepušač // Nonsmoker	36 (81.82%)	29 (65.91%)	
Alkohol / Alcohol			*p< 0,05
Da / Yes	19 (43.18%)	10 (22.73%)	
Ne / No	25 (56.82%)	34 (72.27%)	
Sistemska bolest / Systemic illness			*p< 0,05
Da / Yes	15 (34.09%)	19 (43.18%)	
Ne / No	29 (65.91%)	25 (56.82%)	
Soc-ek. st. / Soc-ec. st.			*p< 0,05
Dosta / Plenty	8 (18.18%)	6 (13.64%)	
Dovoljno / Enough	21 (47.73%)	28 (63.64%)	
Nedovoljno / Not enough	15 (34.09%)	10 (22.73%)	
Godine / Ages			*p< 0,05
SV±SD / mean±SD	62,34±8,14	64,21±5,21	

*Chi-square test

Tabela 2. Komparacija parodontalnih parametara između grupa pre terapije i na kontroli
Table 2. Comparison of periodontal parameters between groups before therapy and control

	Sa bazičnom terapijom With basic therapy		Bez bazične terapije Without basic therapy		*p vredn *p value
	pre tretmana before treatment	kontrola control	pre tretmana before treatment	kontrola control	
	SV±SD; mean±SD		SV±SD; mean±SD		
Plak indeks/ Plaque index	1.92±0.56	0.59±0.36* ^a	1.95±0.58	0.63±0.49	p<0.001
Gingivalni indeks/ Gingival index	1.99±0.32	0.86±0.21* ^a	2.01±0.63	1.73±0.51	p<0.001
Indeks krvarenja/ Bleeding index	1.55±0.38	0.21±0.01* ^a	1.67±0.35	1.01±0.32	p<0.001
DPDž/PPD,					
≤ 5mm	4.12±0.39	2.68±0.29* ^a	4.21±0.38	3.96±0.21	p<0.001
> 5mm	5.22±0.66	3.77±0.42* ^a	4.98±0.61	4.54±0.54	p<0.001
NPE/CAL,					
≤ 3mm	2.54±0.28	1.71±0.11* ^a	2.79±0.32	2.13±0.22	p<0.001
> 3mm	3.18±0.19	2.16±0.08* ^a	3.56±0.57	3.04±0.49	p<0.001

*p<0,001 – posle tretmana u grupi; ^a p<0,05 – posle tretmana između grupa

PPD – dubina parodontalnog džepa; CAL – nivo pripojnog epitela

* p<0.001 – after treatment in the group; ^a p<0.05 – after treatment between groups

PPD – periodontal pocket depth; CAL – clinical attachment level

Tabela 3. Komparacija odgovora iz upitnika OHIP-14 pre i mesec dana nakon tretmana
Table 3. Comparison of responses from OHIP-14 questionnaire before and a month after treatment

		Sa bazičnom terapijom With basic therapy		*p vredn *p value	Bez bazične terapije Without basic therapy		*p vredn *p value
		pre th before th	kontrola control		pre th before th	kontrola control	
Funkcionalna ograničenja/ Functional limitations	otežano žvakanje/ difficult chewing	5 (11.36%)	2 (4.55%)	n.s.	7 (15.91%)	7 (15.91%)	n.s.
	koncentracija/ concentration	-	-	-	-	-	-
Fizički bol/ Physical pain	nelagodnost pri jelu/ discomfort at the meal	3 (6.82%)	2 (4.55%)	n.s.	1 (2.27%)	1 (2.27%)	n.s.
	apsces/ abscess	28 (63.64%)	9 (20.45%)	p<0.001	13 (29.55%)	10 (44.00%)	n.s.
Psihološka nelagodnost/ Psychological discomfort	loš zadah/ fedor	40 (90.91%)	25 (56.82%)	p<0.001	13 (29.55%)	7 (15.91%)	p<0.001
	impakcija hrane/ food impaction	25 (56.82%)	16 (36.36%)	p<0.001	17 (38.64%)	14 (31.82%)	n.s.
Fizička nesposobnost/ Physical incapacity	trošenje novca/ spending money	-	-	-	-	-	-
	dnevne aktivnosti/ daily activities	6 (13.64%)	2 (4.55%)	n.s.	4 (9.10%)	4 (9.10%)	n.s.
Psihološka invalidnost/ Psychological disability	izbegavanje smejanja/ avoiding laughing	14 (31.82%)	5 (11.36%)	p<0.001	9 (20.45%)	7 (15.91%)	n.s.
	manjak poverenja/ lack of trust confidence	7 (15.91%)	3 (6.82%)	n.s.	-	-	-
Socijalna nesposobnost/ Social incompetence	Stidljivost/ Shyness	5 (11.36%)	5 (11.36%)	n.s.	-	-	-
	izbegavanje izlaženja/ avoidance of exposure	-	-	-	-	-	-
Hendikep/ Hendicap	izbegavanje određene hrane/ avoiding certain foods	35 (79.55%)	18 (40.91%)	p<0.001	14 (31.82%)	13 (29.55%)	n.s.
	poremećaj spavanja/ sleep disorder	-	-	-	-	-	-

*Cochrane test

Tabela 4. Odgovori pacijenata na pitanje o stanju gingive i uticaju oboljenja na kvalitet života

Table 4. Answers of patients to the question of the state of the gingiva and the impact of the disease on the quality of life

forma oboljenja/ Disease form	n (%)	Odgovori pacijenata na pitanje "Kako trenutno možete opisati vaše stanje gingive?" Patients answers to the question "How can you currently describe your gingival status?"				
		Odlično/ Perfect	veoma dobro/ Very good	Dobro/ Good	Loše/ Bad	veoma loše/ Very bad
Umerena PD/ Moderate PD	59 (67.04%)	8 (13.56%)	3 (5.08%)	6 (10.17%)	24 (40.68%)	18 (30.51%)
teška PD/ Severe PD	29 (32.96%)	1 (3.45%)	2 (6.90%)	5 (17.24%)	16 (55.17%)	5 (17.24%)
Pitanja/Questions		Odgovori pacijenata na pitanja o "uticaju parodontalnog oboljenja na svakodnevne aktivnosti?" Answers patients to questions about "the effect of periodontal disease on everyday activities?"				
		Nikad/ Never	Ponekad/ Sometimes	Često/ Often	Uvek/ Always	
Da li Vam prisustvo PD utiče na ishranu? Does the presence of PD affect your meal?		12 (13.64%)	11 (12.50%)	44 (50.00%)	21 (23.86%)	
Da li Vam prisustvo PD utiče na komunikaciju sa drugim ljudima? Does the presence of PD influence your communication with other people?		9 (10.23%)	2 (2.27%)	54 (61.36%)	23 (26.14%)	
Da li imate problema sa spavanjem zbog prisustva PD? Do you have sleeping trouble because of the presence of PD?		31 (35.23%)	36 (40.91%)	14 (15.91%)	7 (7.95%)	
Da li PD utiče na pojavu anksioznosti kod Vas? Does PD affect the appearance of anxiety in you?		55 (62.50%)	23 (26.14%)	8 (9.10%)	-	
Da li imate bolove ? Do you have pain?		46 (52.27%)	18 (20.45%)	17 (19.32%)	7 (7.95%)	

Samoprocena zdravlja gingive dobijena je pitanjem: "Kako trenutno možete opisati vaše stanje gingive?". Odgovori na ovo pitanje morali su biti izabrani između sledećih tvrdnji: „odlično, veoma dobro, dobro, loše, veoma loše“. Svi pacijenti koji su izabrali „loše“ ili „veoma loše“ smatrali su se da imaju najlošiju samoprocenu zdravlja gingive.

Uticaj parodontalnog oboljenja aktivnosti svakodnevnog života izražen je jednostavnim upitnikom koji je uključivao nekoliko pitanja o uticaju na ishranu, komunikaciju sa drugim ljudima, spavanje, anksioznost i bol. Pacijenti su odgovarali jednim od sledećih odgovora: „nikada, ponekad, često i uvek“. Za sve pacijente koji su odgovarali sa „često“ ili „uvek“ smatralo se da imaju najčešće probleme vezane za svakodnevne životne aktivnosti (Tabela 4).

Diskusija

Danas se kvalitet života sve više koristi kao validan, odgovarajući i značajan faktor prema kome se određuju potrebe i intervencije u praksi javnog zdravlja. Mere kvaliteta života povezane su sa zdravljem, uključujući objektivne i subjektivne procene u smislu sprečavanja pojave hroničnih oboljenja, kao i za procenu efikasnosti terapijskih procedura⁵³.

Stvarna promena u percepciji kvaliteta života pacijenata često se pripisivala poboljšanju kliničkog statusa. Konceptualni model kvaliteta života je osnova razvoja upitnika OHIP-14 i uključuje biopsiho-socijalni put u kome je percepcija kvaliteta života povezana sa zdravstvenim problemima. Stoga, postoje dve različite procene: (I) merenje kliničkih parametara od strane kliničara, i (II) procena oralnog zdravlja povezanog sa kvalitetom života i to kako ga doživljavaju sami pacijenti. Ranije merenje bilo je zasnovano na znakovima i simptomima koje je opisivao pacijent, a kliničari ih koristili kao indikatore zdravlja i statusa bolesti.

Hronična parodontopatija karakteriše se veoma sporom progresijom koja ide bez pojave ikakvih bolova. Iz ovog razloga, veliki broj pacijenata nije svestan prisustva parodontopatije jer bolest ne uključuje pojavu bola.

Tako se pacijent, vremenom, prilagođava pojavi određenih kliničkih simptoma, kao što su impakcija hrane, pojava fetora, labavljenje zuba, kao i krvarenje u kasnijoj kliničkoj slici oboljenja.

The self-assessment of gingival health was obtained by asking: "How can you currently describe your gingival state?" The answers to this question had to be chosen among the following statements: "excellent, very good, good, bad, very bad." All patients who chose "bad" or "very bad" were considered to have the worst self-assessment of gingival health.

The impact of periodontal disease on the daily activities was expressed by a simple questionnaire that included several questions about the effect on diet, communication with other people, sleep, anxiety, and pain. Patients responded with one of the following answers: "never, sometimes, often and always". All patients who answered "often" or "always" were considered to have the most common problems related to everyday life activities (Table 4).

Discussion

Today, quality of life is increasingly being used as a valid, appropriate and significant factor in determining needs and interventions in public health practice. The measures of quality of life are related to health, including objective and subjective assessments in terms of preventing the occurrence of chronic diseases, and assessing the effectiveness of therapeutic procedures⁵³.

The actual change in perception of the quality of life of patients was often attributed to the improvement of clinical status. The conceptual QoL model is the basis for the development of the OHIP-14 questionnaire and includes a biopsychosocial path in which the perception of quality of life is associated with health problems. Therefore, there are two different assessments: (I) measurement of clinical parameters by clinicians, and (II) assessment of oral health-related quality of life and how it is experienced by patients themselves. Earlier measurements were based on the signs and symptoms described by the patient, and clinicians used them as indicators of health and disease status.

Chronic periodontitis is characterized by a very slow progression without any pain. For this reason, a large number of patients are not aware of the presence of periodontal disease because the disease does not include the onset of pain.

Thus, over time, the patient adjusts to the appearance of certain clinical symptoms, such as food impaction, the appearance of bad breath, loosening of the teeth, and bleeding in a later clinical picture of the disease.

Veoma mali procenat pacijenata zna da hronična parodontopatija može biti uslov koji će uticati na oralno zdravlje vezano za sam kvalitet života pacijenta. Nedavna studija Akrama i sar.⁵⁴ pokazala je da je poređenjem rezultata između ispitivane i kontrolne grupe uočeno poboljšanje u svim kliničkim parodontalnim parametrima (plakindeks, gingivalni indeks i indeks krvarenja) u ispitivanoj grupi nakon 12 nedelja⁵⁴. Mnoga istraživanja^{29,31,55} su radi identifikovanja razlika pre i posle terapije koristila Cohen-ov standardizovani upitnik, koje su se pokazivale klinički značajnim razlikama⁵⁶. Saito i sar.³¹ utvrdili su u svojoj studiji da se značajno poboljšanje u kvalitetu života pacijenata javlja nakon parodontalnog tretmana. U ovom istraživanju, svi klinički parametri (plak indeks, gingivalni indeks i indeks krvarenja, kao i dubina parodontalnih džepova i nivo epitelnog pripoja), pokazali su značajno poboljšanje posle mesec dana, kako unutar ispitivane grupe, tako i u poređenju sa kontrolnom grupom, što je u saglasnosti sa gore navedenim rezultatima drugih autora. Rezultati ovog ispitivanja ukazuju na direktnu vezu između kliničkih parametara stanja parodonta pacijenata, svakodnevnih životnih aktivnosti i samoprocene zdravlja gingive, što je u saglasnosti sa rezultatima (Ng i Leung, 2006)⁵³, koji su pronašli jasnu vezu između bolesti parodonta i svakodnevnih životnih aktivnosti. Pokazalo se da je bazična terapija parodontopatije efikasna u poboljšanju kliničkih parametara kod starijih osoba, pa je zanimljivo napomenuti da ovaj način terapije parodontopatije može dati bolje kliničke ishode za oralno zdravlje, kao i sam kvalitet života pacijenta. Ovo je prvo pilot istraživanje kojim se ispitivao kvalitet života vezan za oralno zdravlje osoba starijeg doba parodontopatijom u Srbiji, u kojem se koristio modifikovani upitnik Cunha-cruz i sar.⁵². Rezultati ovog istraživanja pokazali su da odgovori na pitanja iz OHIP-14 nisu pokazali značajne promene u odgovorima kontrolne grupe na početku i mesec dana kasnije. Međutim, u ispitivanoj grupi, došlo je do značajnog poboljšanja kvaliteta života, što se vidi iz odgovora na upitnik OHIP-14.

OHIP upitnik je prvobitno koncipiran tako da se, na osnovu podataka iz istraživanja o oralnom zdravlju starijih osoba koje imaju hroničnu parodontopatiju, ispita povezanost između lične percepcije pacijenta o svom oralnom zdravlju i niza kliničkih parametara samog parodontalnog oboljenja.

A very small percentage of patients know that chronic periodontitis can be a condition that will affect oral health in relation to the quality of life. A recent study conducted by Akram et al. showed that the improvement in all clinical periodontal parameters (plaque index, gingival index, and bleeding index) was observed in the investigated group after 12 weeks by comparing the results between the examined and the control group⁵⁴. Many studies^{29,31,55} used Cohen's standardized questionnaires in order to identify differences before and after therapy, which showed clinically significant differences⁵⁶. Saito et al.³¹ found in their study that a significant improvement in the quality of life of patients occurs after the periodontal treatment. In this study, all clinical parameters (plaque index, gingival index and bleeding index, and depth of periodontal pockets and epithelial attachment level) showed significant improvement after a month, both within the investigated group and in comparison with the control group, which is in accordance with the results of the aforementioned authors. The results of this study indicate a direct relationship. The results of this study indicate a direct relationship between the clinical parameters of the patient's periodontal condition, daily life activities and self-evaluation of gingival health, which is in agreement with the results (Ng and Leung, 2006)⁵³ who have found a clear relationship between periodontal disease and daily life activities. It has been shown that the basic periodontal therapy is effective in improving clinical parameters in elderly, so it is interesting to note that this method of therapy can give the better clinical outcomes regarding the oral health, as well as the quality of patient's life itself.

This is the first pilot study to examine the quality of life associated with the oral health of older people with the periodontal disease in Serbia, using a modified questionnaire Cunha-Cruz et al.⁵². The results of this study have shown that the answers to the OHIP-14 questions have not shown significant changes in control group responses at the beginning and a month later. However, in the examined group, there has been a significant improvement in the quality of life, as it can be seen from the answers to the OHIP-14 questionnaire.

The OHIP questionnaire was originally designed so that, based on data from the research on the oral health of elderly people with chronic periodontitis, the relationship between the patient's personal.

Nedostatak ovog istraživanja takođe može biti i vreme praćenja rezultata, jer mesec dana, koliki je bio period praćenja ispitivanih pacijenata, nije bio dovoljan period da se uoče teže promene, kao što je to bio slučaj u drugim studijama u kojima je praćenje trajalo oko godinu dana^{57,58}.

U okviru odgovora na pitanja iz OHIP-14, istakle su se četiri najznačajnije stavke, fizički bol, psihološka nelagodnost, psihološka invalidnost, kao i hendikep u okviru kojeg se javlja apsces kao komplikacija parodontopatije.

Nakon odrađene terapije u ispitivanoj grupi, došlo je do značajnog poboljšanja ovih stavki, a to su "loš dah" i „impakcija hrane“ (psihološka nelagodnost), izbegavanje smejanja (psihološka invalidnost), apsces (fizički bol) i izbegavanje određene vrste hrane (hendikep). Poboljšanje „impakcije hrane“ nakon bazične terapije očekivalo bi se u svim studijama. Progresija hronične parodontopatije karakteriše se destrukcijom aleolarne kosti, a samim tim i proširenjem interdentalnih prostora, što dovodi do impakcije hrane i izbegavanja unosa određene vrste hrane.

Nakon odrađene bazične terapije i davanja instrukcija o održavanju oralne higijene, kod pacijenata ispitivane grupe došlo je do poboljšanja stanja parodonta i kvaliteta života ovih pacijenata, što je i prikazano odgovorima pre (56,82%) i posle terapije (36,36%). Pored "psihološke nelagodnosti i invalidnosti", rezultati ovog istraživanja su u saglasnosti sa rezultatima drugih istraživanja^{48,59}, i kod stavke "fizički bol" pre (63,64%) i posle terapije parodontopatije (20,45%) uočavaju se pozitivni odgovori iz upitnika OHIP-14. U ranijim istraživanjima gde je korišćen OHIP, do značajnog poboljšanja ovih parametara (fizički bol i psihološka nelagodnost) došlo je nakon detaljne korekcije mobilnih proteza kod starijih pacijenata^{60,61,54}. Poboljšanje ishrane je takođe bilo jedno od značajnih znakova koji su doveli do boljeg kvaliteta života pacijenata starijeg doba⁶²⁻⁶⁴. Slično rezultatima iz ovog istraživanja, Brauchle i sar.⁵⁹ su takođe, u svom ispitivanju, prikazali pozitivni uticaj bazične terapije na kvalitet života vezan za oralno zdravlje kod pacijenata sa hroničnom parodontopatijom⁵⁹.

Ove četiri stavke (fizička bol i psihološka nelagodnost, psihološka invalidnost, hendikep) bile su očekivani problem koji će uticati na promene odgovora iz upitnika OHIP-a pre i posle tretmana, jer je usna duplja direktno uključena u akt žvakanja i grženja, a time i u uživanju u hrani.

perception of the oral health and a number of clinical parameters of the periodontal disease itself can be examined. The disadvantage of this study may also be the time of monitoring the results because, in a month, the period of follow-up of the examined patients was not sufficient to notice all changes, as it was the case in other studies in which follow-up took about a year^{57,58}.

Within the answers to the OHIP-14 questions, four of the most significant parameters highlighted - physical pain, psychological discomfort, psychological disability, as well as handicap in which abscess appear as a complication of the periodontal disease.

After the therapy was done in the examined group there was a significant improvement in aforementioned parameters, which are "bad breath" and "food impaction" (psychological discomfort), avoidance of laughing (psychological disability), abscess (physical pain) and avoidance of certain food (handicap). The improvement of the "food impaction" after the basic therapy would be expected in all studies. The progression of chronic periodontitis is characterized by the destruction of the alveolar bone, and consequently by the expansion of interdental spaces, which leads to food impaction and avoiding the intake of certain food. After completing the basic therapy and instructions on maintaining oral hygiene, patients in the investigated group experienced improvement of the periodontal condition and quality of life, which was shown in answers to the questionnaire before (56.82%) and after the therapy (36.36%). In addition to the "psychological discomfort and disability", the results of this study are consistent with the results of other surveys^{48,59}, and in the case of "physical pain" before (63.64%) and after the therapy (20.45%) positive answers are observed from the OHIP-14 questionnaire. In previous studies where OHIP was used, significant improvement of these parameters (physical pain and psychological discomfort) occurred after detailed correction of a mobile prosthesis in elderly patients^{60,61,54}. Nutrition improvement was also one of the significant signs that led to a better quality of life in elderly patients⁶²⁻⁶⁴. Similarly to the results of this study, Brauchle et al., showed the positive impact of basic therapy on the quality of life associated with oral health in patients with chronic periodontitis⁵⁹.

Rezultati ovog istraživanja su u saglasnosti sa drugim studijama u kojima je došlo do promene kvaliteta života između grupa. Slično tome, razlika između dveju grupa nije bila značajna, iako je OHIP rađen kod različito tretiranih pacijenata. Ispitivana grupa je pokazala bolje poboljšanje, što je u saglasnosti sa rezultatima drugih studija^{65,60,61}.

Procena narušenog oralnog zdravlja sa stanovišta pacijenta poslednjih godina, zauzela je važno mesto u istraživačkom području⁶⁶. Tako se krenulo sa upotrebom mera usmerenih ka uticaju oralnog zdravlja na kvalitet života sa stanovišta percepcije samih pacijenata⁶⁷. Rezultati ovog istraživanja pokazali su da je 71,59% pacijenata izrazilo svoje zdravlje gingive kao zabrinjavajuće (loše i veoma loše), na osnovu jednog pitanja u upitniku. Pored toga, svi učesnici su naveli barem jednu životnu aktivnost koja im je ugrožena zbog prisustva parodontalnog oboljenja. Najveći problem javljao se kod komunikacije sa drugim osobama (61,36%) i prilikom ishrane (50%). Rezultati ovog istraživanja, pak, nisu u saglasnosti sa rezultatima iz sveobuhvatnog statističkog istraživanja u Americi⁶⁸, gde je 36% odraslih pacijenata izrazilo svoje zdravlje gingive kao „loše“.

Rezultati ove studije mogli bi se objasniti time da pacijenti postaju svesniji o negativnim simptomima (ogoličenje korenova, krvarenje, klaćenje, migracija i gubitak zuba) koji se mogu javiti na njihovim zubima i gingivi u toku razvoja parodontalnog oboljenja. Mali procenat pacijenata (7,95%) naveo je da je „bol“ najviše vezan za prisustvo komplikacija oboljenja koje im remete svakodnevne životne aktivnosti. Spominjanje „anksioznosti“ od strane 11% pacijenata može da se odnosi na unutrašnja osećanja pacijenata zbog lošeg kliničkog stanja gingive. Problemi sa ishranom, kao jednom od svakodnevnih životnih aktivnosti kod osoba starijeg doba sa parodontopatijom, odražavaju se na poteškoće vezane za unos uglavnom, čvrste hrane. Hajian-Tilaki i sar.⁶⁹ sprovedla je studiju za ocenu zdravstvenog statusa i kvaliteta života pacijenata na hemodijalizi. Ustanovili su da pacijenti na hemodijalizi imaju loše oralno zdravlje i stanje parodonta, ali da su bili zadovoljni svojim oralnim zdravstvenim stanjem i njihov kvalitet života u vezi sa oralnim zdravljem bio je, prema njihovoj percepciji prilično dobar. Irani i dr.⁷⁰ istraživali su uticaj statusa parodonta na kvalitet života kod pacijenata sa i bez dijabetes melitusa tipa 2 (T2DM).

These four parameters (physical pain, psychological discomfort, psychological disability, and handicap) were an expected problem that would affect the change of answers from the OHIP questionnaire before and after the treatment, because the oral cavity is directly involved in the act of chewing and biting, and therefore enjoying the food. The results of this study are in agreement with other studies in which the quality of life between groups also changed. Similarly, the difference between the two groups was not significant, although OHIP was performed in different patients. The investigated group showed better improvement, which is in agreement with the results of other studies^{65,60,61}.

Assessment of impaired oral health from the patient's point of view in recent years has taken an important place in the research area⁶⁶. So, the use of measures aimed at the impact of oral health on the quality of life from the patient's point of view began to be implemented⁶⁷. Results of this study showed that 71.59% of patients expressed their concerns about gingival health (bad and very bad), on the basis of one question in the questionnaire. In addition, all participants listed at least one life-activity that was jeopardized by the presence of periodontal disease. The biggest problem occurred when communicating with other people (61.36%) and (50%) during the eating. The results of this study are in disaccordance with statistical data in United States⁶⁸, where 36% of adult patients expressed their gingival health as "bad".

The results of this study could be explained by the fact that patients become more aware of negative symptoms (fractured tooth roots, bleeding, loose tooth, migration, and tooth loss) that can occur on their teeth and gingiva during the development of periodontal disease. A small percentage of patients (7.95%) said that "pain" is most related to the presence of complications of the disease, and it disturbed their everyday life activities. Mention of "anxiety" by 11% of patients can refer to the inner feelings of patients due to the poor clinical condition of the gingiva. Nutrition problems, as one of everyday life activities in older people with periodontal disease, are reflected into the difficulties associated with intake, mainly, solid food. Hajian-Tilaki et al.⁶⁹ conducted a study to assess the health status and quality of life in hemodialysis patients. They found that patients on hemodialysis had poor oral health and periodontitis state, but they were satisfied with their oral health status and their oral health-related quality of life was,

Otkrili su da T2DM ne utiče na ukupan kvalitet života koji je povezan sa oralnim zdravljem, već da hronična parodontopatija kod pacijenata sa dijabetesom izaziva promene u kvalitetu života kao i samo stanje oralnog zdravlja ovih pacijenata.

Treba istaći da, sve odgovore iz upitnika, ipak treba tumačiti pažljivo, jer dugogodišnje razvijanje parodontalnog oboljenja može dovesti do smanjenja osetljivosti pacijenata. Takođe i sama svest pacijenata i njihov pogled na samo oboljenje može uticati na odgovore⁷¹. Treba uzeti u obzir i da osobe imaju različite estetske, ali i društvene normative koji diktiraju njihovu percepciju oboljenja, da posle terapije obraćaju više pažnje na stanje parodonta, ili pak da su imali ozbiljne probleme u usnoj duplji koji bi uticali na njihove odgovore. Ovo istraživanje bilo je sa malom veličinom uzorka. Rezultati drugih studija sa malim uzorkom^{47,48,60,72,73} bili su slični rezultatima ovog ispitivanja. Pošto je uzorak ovog istraživanja bio relativno mali u poređenju sa drugim istraživanjima iz oblasti kvaliteta života, koja se odnose na oralno zdravlje kod starijih osoba, može se posmatrati kao pilot studija koja se mora korigovati pre njene primene u bilo kojim daljim istraživanjima sa većim uzorkom. Rezultati ovog istraživanja mogu otvoriti vrata sveobuhvatnijim statističkim istraživanjima u istom polju.

Zaključak

Bazična terapija parodontopatije poboljšava kvalitet života osoba starije dobi sa hroničnom parodontopatijom. Rezultati ovog istraživanja pokazali su da je parodontopatija uticala na pogoršanje nekoliko svakodnevnih životnih učesnika studije. Većina učesnika sa parodontopatijom označila je da je njihovo zdravlje gingive loše ili veoma loše. Ovo ukazuje na to da su pacijenti svesni negativnih promena na njihovom parodontu. Pronađena je i linearna veza između kliničkih parametara i subjektivne percepcije stanja usne duplje kod ispitanika, što se odrazilo i na pozitivnije odgovore pre i posle terapije. Međutim, kako je istraživanje urađeno na relativno malom uzorku, potrebne su novije sveobuhvatnije studije sa novim dijagnostičkim metodama.

according to their perception. pretty good. Irani et al.⁷⁰ investigated the effect of periodontal status on quality of life in patients with and without type 2 diabetes mellitus (T2DM). They found that T2DM does not affect the overall quality of life associated with oral health, but that chronic periodontal disease in patients with diabetes causes changes in quality of life as well as the state of oral health of these patients.

It should be noted that all the answers from the questionnaire should be interpreted carefully since the long-term development of periodontal disease can lead to a reduction in patients' sensitivity. Also the patient's awareness of themselves and their view of the disease itself can affect the responses⁷¹. It should also be taken into account that persons have different aesthetic and social norms that dictate their perception of the disease. So, after the therapy, the patients pay more attention to the condition of the periodontium, or they had serious problems regarding the oral cavity that would affect their responses. This study was conducted with a small sample size. The results of other studies with a small sample^{47,48,60,72,73} were similar to the results of this study. Since the sample of this study was relatively small compared to the other studies in the field of oral health-related quality of life in elderly, it can be seen as a pilot study that must be corrected prior to its application in any further studies with a larger sample. The results of this research can open the door to more comprehensive statistical surveys in the same field.

Conclusion

The basic periodontal therapy improves the quality of life of elderly people with chronic periodontal disease. The results of this study showed that periodontitis has affected the deterioration of several daily life activities of the study participants. Most participants with periodontal disease indicated that their gingival state was bad or very bad. This suggests that patients are aware of negative changes in their periodontium. A linear relationship was also established between clinical parameters and subjective perception of the oral cavity state by the respondents, which also reflected more positive responses before and after the therapy. However, as the research is done on a relatively small sample, more and more comprehensive studies are needed with new diagnostic methods.

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