

Subjective Assessment of Mastication as Parameter for Successful Prosthetic Therapy

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SUMMARY

Introduction Success in functional rehabilitation of the craniomandibular system in patients without teeth, which have total prosthesis, can be assessed using different clinical and functional methods. Subjective assessment, motivation, comfort level and functional efficacy are important elements for adaptation to dental prosthesis as well as base for success in prosthetic therapy. The aim of this study was to evaluate the importance of subjective assessment of the mastication in people with new dental prosthesis as well as to assess the value of that parameter in determining the successful prosthetic therapy.

Material and Methods Study was conducted at the Dental Clinic in Novi Sad. Thirty patients (16 males and 14 females) with average age of 62.5 years who received total prosthesis were included. Analysis was done according to the data from the medical records and conducted survey in the form of questionnaire which was adjusted to our clinical examinations.

Results Results showed that 96.6% of the patients were satisfied with new prosthesis. Subjective assessment of the quality of their mastication before therapy showed that 63.4% consider their mastication as unsatisfied, 26.6% satisfied while 10% of toothless patients thought their mastication was good. Statistic analysis showed there was significant difference in subjective assessment before and after the therapy ($p < 0.01$). In fact, there was significant connection between subjective assessment of the mastication and satisfaction with new prosthesis and therapy at all ($p < 0.01$).

Conclusion Patients satisfaction with total prosthesis and subjective assessment of mastication are in direct correlation with successful prosthetic treatment. Results of subjective assessment of the mastication are important and can be used as a parameter for success along with precise survey.

Keywords: subjective assessment; mastication; total prosthesis

INTRODUCTION

Loss of all teeth leads to damage of highly integrated parts of craniomandibular system which allows mastication, swallowing, talking, breathing, face appearance and above all there is psychological effect [1]. Absence of oral tissue as well as deficiency of proprioceptive impulses from the periodontium cause functional problems. It leads to changes in response to different impulses and inadequate stimulus for masticator muscles. Functional problems are the consequence of the loss of unconscious memory samples, therefore consciousness of objective mastication assessment is lost.

Masticator system tends to compensate new circumstances with high adaptability and changes in the model of mastication. It means that a toothless person adapt their mastication by changes in taking food (speed of mastication, type of food, taking smaller peaces etc.) [2, 3]. Therefore, their subjective assessment of mastication is very valid what is confirmed in the similar studies [4, 5].

Success in functional rehabilitation of craniomandibular system in patient with total prosthesis is evaluated using different clinical and functional methods (different mastication tests, electromyography etc). Anatomy-functional rehabilitation of the craniomandibular system in toothless patients is achieved by successful and adequate prosthetic therapy by making total prosthesis. Patients satisfied with

new prosthesis and also with esthetic improvement usually present their mastication much better than it really is [6].

Many studies investigated the impact of emotional factors on difficult adaptation as well as the correlation of patient satisfaction and real quality of prosthesis [7, 8]. Investigations showed that adaptation is faster if there is positive relation patient-dentist and prosthetic rehabilitation depends mostly on patient's motivation and preparation as well as offered solutions for therapy [9, 10, 11]. With new prosthesis patients usually get better life quality, which also has an impact on patient's self assessment of the prosthesis [12, 13].

Subjective assessment, motivation, comfort level and functional efficacy are important elements for adaptation to dental prosthesis as well as base for success of prosthetic therapy.

The aim of this study was to evaluate the importance of subjective assessment of mastication in people with new dental prosthesis as well as to assess the value of this parameter in determining successful prosthetic therapy.

MATERIAL AND METHODS

Study was conducted at the Dental Clinic in Novi Sad and included thirty patients (16 males and 14 females) with average age 62.5 years. The prerequisite was that they did not have total prosthesis before and they were in good

general condition. They were explained the aim, methods and way of examination and they signed written agreement. During prosthetic therapy they received total prosthesis, with respect of all principles of prosthetic therapy.

During the first visit anamnesis was taken from the patients and clinical examination was done. All data was put in medical records, survey was performed and questionnaires were fulfilled. Questionnaire was not anonymous with closed type of questions, logically connected, starting from general to specific, understandable and adequate for simple and easy answers.

Survey had two parts. The first part consisted of questions about patients attitude regarding food and mastication (hard, semi hard and soft food) and they gave answers when they came first time and couple a days after getting prosthesis. The second part of the survey was about mastication and process of getting prosthesis. That part was performed after period of adaptation. During adaptation, patients were divided in two groups (equally in regards to gender). First group was coming at regular appointments when they were educated and motivated for prosthesis use (visual and printed material), educated in oral hygiene, received prosthesis adjustment as well as when positive relation patient-dentist was established. Second group received only prosthesis adjustment only when it was needed.

Data from the survey was managed using nominal scale which examines life quality of the people who have total prosthesis. Score of 35 to 49 was considered as successful therapy, 30 to 35 partially successful and below 30 unsuccessful [12].

Results are shown in tables. They were tested using χ^2 -test.

RESULTS

According to the survey analysis on the question about subjective assessment of the mastication regarding different food 63.4% of the patients considered their mastication before therapy as not satisfied, 26.6% as satisfied and 10% of patients as good. After prosthetic rehabilitation 27 patients assessed their mastication as good and none of the patients assessed mastication as not satisfied (Table 1). Statistic analysis of the data on subjective assessment of the mastication different food (hard, semi hard and

Table 1. Subjective assesment of the mastication quality regarding different types of food

Tabela 1. Subjektivna procena kvaliteta žvakanja u odnosu na različite vrste hrane

Period Period	Number of patients Broj ispitanika	Mastication Žvakanje		
		Good Dobro	Satisfied Zadovoljavajuće	Unsatisfied Loše
Before treatment Pre lečenja	30	3 (10%)	8 (26.6%)	19 (63.4%)
After treatment Posle lečenja	30	27 (90%)	3 (10%)	0 (0%)

soft) before and after prosthetic therapy showed significant difference ($p < 0.01$).

Analysis of the data on the patient's satisfaction about quality of mastication before and after rehabilitation is shown in Tables 2 and 3. A half of all patients were motivated during period of adaptation. 9 of them were unsatisfied with mastication quality before treatment while after treatment only one person was unsatisfied (Table 2). In the group of 15 patients who were not motivated during adaptation period, 10 were unsatisfied and only 5 were satisfied with their mastication before prosthetic therapy. After the treatment 80% of them were satisfied with mastication quality (Table 3). Statistic analysis of the data on patients satisfaction on the quality of mastication before and after prosthetic therapy showed difference but not the significant one. It was confirmed that motivation during prosthetic therapy was important but not crucial.

Table 2. Subjective assesment of the mastication quality in the group motivated during period of adaptation after therapy.

Tabela 2. Zadovoljstvo kvalitetom žvakanja kod ispitanika koji su bili motivisani tokom perioda adaptacije na protezu

Period Period	Number of patients Broj ispitanika	Satisfied Zadovoljni	Unsatisfied Nezadovoljni
Before treatment Pre lečenja	15	6 (40%)	9 (60%)
After treatment Posle lečenja	15	14 (93.3%)	1 (6.66%)

Table 3. Subjective assesment of the mastication quality in the group not motivated during period of adaptation after therapy.

Tabela 3. Zadovoljstvo kvalitetom žvakanja kod ispitanika koji nisu bili motivisani tokom perioda adaptacije na protezu

Period Period	Number of patients Broj ispitanika	Satisfied Zadovoljni	Unsatisfied Nezadovoljni
Before treatment Pre lečenja	15	5 (33.3%)	10 (66.6%)
After treatment Posle lečenja	15	12 (80%)	3 (20%)

Table 4. Patient satisfaction with new prosthesis regarding the gender

Tabela 4. Zadovoljstvo ispitanika novim protezama u odnosu na pol

Sex Pol	Number of patients Broj ispitanika	Satisfied Zadovoljni	Unsatisfied Nezadovoljni
Male Muški	16	16 (100%)	0 (0%)
Female Ženski	14	13 (92.8%)	1 (7.14%)

Table 5. Correlation between subjective assessment of mastication and satisfaction with prosthetic therapy

Tabela 5. Korelacija između subjektivne procene žvakanja i zadovoljstva protetičkom rehabilitacijom

Satisfaction Zadovoljstvo	Number of patients Broj ispitanika	Satisfied Zadovoljni	Unsatisfied Nezadovoljni
With mastication Žvakanjem	30	26 (89.8%)	4 (13.3%)
With prosthesis Protezama	30	29 (96.6%)	1 (3.33%)

Data regarding gender and patient satisfaction with new prosthesis is shown in Table 4. 13 women were satisfied with their prosthesis, only one was not, while all males were satisfied. Statistic analysis did not show differences regarding the gender.

The connection between patient satisfaction with new prosthesis and subjective assessment of mastication quality is shown in Table 5. Only one patient was not satisfied with the prosthesis and 26 considered their mastication after prosthetic therapy and period of adaptation as good. Further testing confirm hypothesis ($p < 0.01$) that there is connection between satisfaction of the patients with total prosthesis and subjective assessment of mastication quality at one side with successful prosthetic therapy on the other side.

DISCUSSION

Success in functional rehabilitation of the toothless patients is hard and complicated and can be evaluated using different clinical and functional methods. This protocol was chosen because it is a part of all studies regarding life quality of elderly people, oral health, adequate prosthesis and subjective satisfaction of the patients. Similar examinations were conducted by Mehl C and others [14, 15]. Also, new trends in this area dictate evaluation of the subjective assessment as one of the parameters for index of oral health [12, 13, 14]. Present study gives the possibility of alternative measurements of mastication in persons who have total prosthesis. These conclusions are in agreement with studies of different authors [16, 17].

These examinations are relatively valid if they are performed during adaptation period. Some studies show that that period of adaptation lasts from two to twelve weeks in patients who have total prosthesis [8, 18, 19, 20]. Different results are obtained probably because of different methodology used. For assessment of functional performance of masticator system maximal values are not needed, so this period was 6 weeks, because it is optimal time for multiple adaptations to new prosthesis.

Simple questions on quality of mastication in patients with some difficulties in occlusion, presented mastication as good because patients were used to the dysfunction. It does consider neither all types of food nor complete and adequate mastication. Adequate prosthetic rehabilitation allows to this patients use of quality and different types of food, makes its mastication easier and these reasons gives them better feeling during mastication. Also, patients are satisfied solving their esthetic problems which came along with teeth loss, so they usually do not think about mastication and present it much better then it is. In this survey prerequisite for results objectivity was obligation to educate patients to masticate properly, to inform them about survey and to manage this examination precisely. Imprecise surveys, unclear questions and data processing were some of the failures in earlier studies. In the studies of Gunn and Heath some of the answers such as: I eat slowly, masticate differentially are classified in unsatisfied mastication and because of imprecise questions results were

also unreliable [21, 22]. The importance of this kind of examinations lies in its suitability for use in clinical practice and possibility to involve students who can get great knowledge in this area.

This survey included questions about different types of food (20 types) which completed a picture on real mastication quality. Some authors analyzed hard or soft food mastication only [23] or a few types of food, what can give unreliable data. It is important to mention that food is changed today, with frequent use of soft, semi processed food, what can have impact on imprecise subjective assessment of the mastication. That can be a reason for different results obtained earlier and today.

In elderly people, subjective assessment of the mastication should be considered as indicator of mastication and functional ability of the masticator system, if general health is good, there are no craniomandibular dysfunctions and prosthesis are done in bilateral balanced occlusion. All of these factors are connected and depend on each other. Criteria for assessment of functional ability of the masticator system are multifactorial [16]. Many authors use the subjective assessment as criteria for functional ability of the masticator system and their results were consistent with the results of the present study [24, 25].

Adaptation on the prosthesis is faster if there is good relation patient-dentist. Results are in agreement to this, but it is not the most important for the successful therapy. There are differences between the two groups but they are not significant. Successful treatment depends on many important factors, where motivation is highly important.

CONCLUSION

In everyday practice one of the basic parameters for the successful prosthetic therapy is subjective assessment of the patient. Satisfaction with the therapy does not depend on the gender. Subjective assessment of the mastication in prosthetic rehabilitation is in accordance with their satisfaction with prosthesis. That mastication assessment is precious and can be used as important parameter to assess success along with precise survey. This kind of assessment for successful therapy should be combined with functional tests and then complete and relevant data could be obtained.

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Subjektivna procena mastikacije kao parametar uspešnosti protetičke terapije

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KRATAK SADRŽAJ

Uvod Uspeh funkcionalne rehabilitacije kranio-mandibularnog sistema kod osoba bez zuba zbrinutih totalnim zubnim protezama ispituje se različitim kliničkim i funkcionalnim metodama. Subjektivna procena, motivisanost, osećaj komfora i funkcionalna efikasnost su važni elementi adaptacije na zubnu nadoknadu, a ujedno su i osnova uspešnosti svake protetičke terapije. Cilj ovoga rada je bio da se ispita značaj subjektivne procene mastikacije kod osoba s novim totalnim zubnim protezama i proceni vrednost ovoga parametra za određivanje uspešnosti protetičke terapije.

Materijal i metode Istraživanje je urađeno na Klinici za stomatologiju u Novom Sadu, a obuhvatilo je 30 pacijenata (16 muškaraca i 14 žena), prosečne starosti od 62,5 godina, kojima su u sklopu protetičke rehabilitacije bile urađene totalne proteze. Analiza je izvršena na osnovu podataka iz zdravstvenih kartona i rezultata upitnika koji je prilagođen našim kliničkim ispitivanjima.

Rezultati Rezultati su pokazali da je 96,6% ispitanika bilo zadovoljno novim protezama. Subjektivna procena kvaliteta žvakanja pre ugradnje proteze ukazala je na to da je 63,4% ispitanika smatralo da im je žvakanje loše, 26,6% da je prilično dobro, a 10% da je dobro. Statistički analiza je otkrila značajnu razliku u subjektivnoj proceni pre i posle protetičke rehabilitacije ($p < 0,01$), odnosno pokazala da postoji značajna povezanost subjektivne procene mastikacije i zadovoljstva novim protezama, a time i uspešne protetičke rehabilitacije ($p < 0,01$).

Zaključak Zadovoljstvo ispitanika totalnim zubnim protezama i subjektivna procena mastikacije su u direktnoj korelaciji s uspešnošću protetičke rehabilitacije. Rezultati subjektivne procene mastikacije su dragoceni i mogu se koristiti kao parametar za procenu uspešnosti uz strogo i precizno izvedenu anketu.

Ključne reči: subjektivna procena; mastikacija; totalna proteza

UVOD

Stanje bezubosti ili gubitak svih prirodnih zuba dovodi do narušavanja visoko integrisanih delova kranio-mandibularnog sistema koji, pre svega, obezbeđuju fiziološki model žvakanja (mastikacije), gutanje, govor, disanje, izgled lica, a nije zanemarljiv ni svojevrsan psihološki efekat [1]. Funkcionalne smetnje nastaju usled nedostatka oralnih tkiva, ali i gubitka impulsa od proprioceptora periodoncijuma, koji su desetostruko osetljiviji od receptora oralne sluznice. Taj nedostatak dovodi do promene odgovora na različite impulse, a samim tim i neadekvatnih stimulusa za mastikatorne mišiće. Funkcionalne smetnje nastaju kao posledica gubitka nesvesno stvorenih memorijalnih uzoraka, odnosno gubi se stvarna svest o objektivnoj proceni funkcije žvakanja.

Mastikatorni sistem nastoji novonastale funkcionalne smetnje da kompenzuje visokom adaptabilnošću i promenama u modelu mastikacije. Konkretno, kod osoba bez zuba dolazi do prilagođavanja procesa žvakanja menjanjem navika u ishrani (promena brzine žvakanja, vrste hrane, uzimanje manjih zalogaja itd.) [2, 3]. Njihova subjektivna procena mastikacije je zbog toga često vrlo validna, što je potvrđeno u sličnim istraživanjima [4, 5].

Uspeh funkcionalne rehabilitacije kranio-mandibularnog sistema kod osoba bez zuba zbrinutih totalnim zubnim protezama ispituje se različitim kliničkim i funkcionalnim metodama (različiti mastikatorni testovi, elektromiografija itd.). Anatomsko-funkcionalna rehabilitacija kranio-mandibularnog sistema u stanju bezubosti se ostvaruje uspešnom i pravilnom protetičkom sanacijom, tj. izradom totalnih zubnih proteza. Pacijenti najčešće zadovoljstvo novim zubnim protezama poistovećuju s rešavanjem estetskih problema, prikazujući tako i svoje žvakanje mnogo boljim nego što ono zaista jeste [6].

Mnogi radovi su kao predmet svoga istraživanja imali uticaj emocionalnih faktora na etiologiju otežane adaptacije i korelaciju između zadovoljstva pacijenta i stvarnog kliničkog kvaliteta zubnih nadoknada [7, 8]. Istraživanja pokazuju da je adaptacija brža ako postoji dobar odnos između pacijenta i stomatologa, te da protetička rehabilitacija uglavnom zavisi od motivacije i pripreme pacijenta, odnosno pružene mogućnosti izbora pacijentima u rešavanju njihove bezubosti [9, 10, 11]. Rešavajući ovaj problem, pacijenti s novim totalnim zubnim protezama popravljaju i kvalitet života, što takođe utiče na samoprocenu ispitanika u odnosu na nove proteze [12, 13].

Subjektivna procena pacijenta, motivisanost, osećaj komfora i funkcionalna efikasnost bitni su za adaptaciju na protetičku zubnu nadoknadu, a to znači i za uspeh same protetičke terapije.

Cilj ovoga rada je bio da se sagleda značaj subjektivne procene mastikacije kod osoba s novim totalnim zubnim nadoknadama i proceni vrednost ovoga parametra za određivanje uspešnosti protetičke terapije.

MATERIJAL I METODE

Istraživanje je urađeno na Klinici za stomatologiju u Novom Sadu i obuhvatilo je 30 osoba (16 muškaraca i 14 žena) prosečne starosti od 62,5 godina. Uslov za uključivanje u studiju bio je da pre nisu nosili totalne proteze i da su dobrog opšteg zdravlja. Svi ispitanici su upoznati s ciljem, metodama i načinom istraživanja, te su za njega dali pisanu saglasnost. Njima su u sklopu protetičke rehabilitacije urađene totalne proteze, uz poštovanje svih principa savremene stomatološke protetikke.

Tokom prve posete pacijentima je uzeta anamneza i obavljen klinički pregled. Uneseni su podaci u zdravstvene kartone,

sprovedeno je anketiranje i popunjeni posebno pripremljeni upitnici. Upitnik nije bio anonimn, a sadržavao je pitanja zatvorenog tipa koja su bila logički povezana, počev od opštih ka specifičnijim, ali razumljiva i pogodna za brze i jednostavne odgovore.

Upitnik se sastojao od dva dela. Prvi deo su činila pitanja vezana za stavove ispitanika o žvakanju i ishrani (tvrda, polutvrda i meka hrana), a popunjavali su ga pri prvom dolasku i u prvih nekoliko dana nakon ugradnje proteze. Drugi deo se odnosio na stavove o žvakanju i procesu proteziranja, a popunjavan je nakon perioda adaptacije na protezu. Tokom ovog perioda ispitanici su svrstani u dve grupe od po 15 pacijenata i podjednake raspodele po polu. Prva grupa je dolazila na redovne kontrolne preglede na kojima su edukovani i motivisani za nošenje proteze (vizuelni i štampani materijal), izvođena je obuka o održavanju oralne higijene, rađene su potrebne korekture i uspostavljen pozitivan odnos između terapeuta i pacijenta. U drugoj grupi su rađene samo korekcije nadoknada i uklanjana oštećenja izazvana iritacijama na tkivima.

Odgovori iz upitnika su bodovani pomoću nominalne skale po ugledu na bodovanje upitnika koji ispituju kvalitet života starih osoba s totalnim protezama. Vrednosti između 35 i 49 bodova označavale su dobar uspeh terapije, između 30 i 35 bodova delimičan uspeh, a vrednosti manje od 30 bodova neuspeh protetičke terapije [12].

Rezultati istraživanja su prikazani tabelarno. Značajnost razlika u dobijenim rezultatima ispitana je pomoću χ^2 -testa.

REZULTATI

Na osnovu analize odgovora dobijenih upitnikom i raspodele odgovora na pitanje o subjektivnoj proceni žvakanja u odnosu na različite vrste hrane, uočeno je da je pre protetičke rehabilitacije 63,4% ispitanika smatralo da im je žvakanje loše, 26,6% da je prilično dobro, a 10% da je dobro. Nakon protetičke rehabilitacije svoje žvakanje je ocenilo dobrim 27 pacijenata, dok nijedan ispitanik nije smatrao da mu je žvakanje loše (Tabela 1). Statističkom analizom rezultata o subjektivnoj proceni žvakanja određenih vrsta hrane (meka, polutvrda, tvrda) u odnosu na protetičku rehabilitaciju uočena je značajna razlika na nivou $p < 0,01$.

Analiza raspodele podataka o zadovoljstvu ispitanika kvalitetom žvakanja pre i posle protetičke rehabilitacije u zavisnosti od motivacije prikazana je u tabelama 2 i 3. Polovina ispitanika je bila motivisana tokom adaptacionog perioda, dok je devet pacijenata bilo nezadovoljno kvalitetom žvakanja pre ugradnje proteze; nakon rehabilitacije i motivacije, nezadovoljna je bila samo jedna osoba (Tabela 2). U grupi od preostalih 15 ispitanika koji tokom adaptacionog perioda nakon ugradnje proteze nisu bili motivisani, njih 10 je bilo nezadovoljno kvalitetom žvakanja pre ugradnje proteze, a samo petoro ih je bilo zadovoljno. Nakon ugradnje proteze njih 12 je bilo zadovoljno kvalitetom žvakanja (Tabela 3). Detaljnijom analizom odnosa zadovoljstva ispitanika kvalitetom žvakanja u zavisnosti od protetičke rehabilitacije i motivacije uočeno je da razlike postoje, ali da nisu statistički značajne. Potvrđeno je da je motivacija važna, ali ne i presudna za zadovoljstvo ispitanika novim protezama.

Podaci vezani za pol i zadovoljstvo ispitanika novim protezama prikazani su u tabeli 4. Uočeno je da je 13 žena bilo zadovoljno novim protezama, dok nije bilo nijednog muškarca

koji nije bio zadovoljan novom zubnom nadoknadom. Analizom rezultata uočeno je da ne postoje statistički značajne razlike u odnosu na pol.

Koliko je zadovoljstvo protezama povezano sa subjektivnom procenom kvaliteta žvakanja vidi se u tabeli 5. Uočava se da samo jedan ispitanik nije bio zadovoljan protezama i da 26 njih smatra da je njihovo žvakanje nakon protetičke rehabilitacije i adaptacionog perioda dobro. Dobijene vrednosti su potvrdile radnu hipotezu da postoji statistički značajna razlika na nivou značajnosti $p < 0,01$, tj. direktna povezanost zadovoljstva ispitanika totalnim zubnim nadoknadama i subjektivne procene kvaliteta žvakanja sa uspešnošću protetičke rehabilitacije.

DISKUSIJA

Uspeh terapijske rehabilitacije osoba bez zuba je težak i komplikovan, a može se pratiti različitim kliničkim i funkcionalnim metodama. Ovaj protokol je izabran jer je sastavni deo skoro svih ispitivanja koja se bave kvalitetom života ljudi starije životne dobi, procenom oralnog zdravlja, odnosno težnjom ka adekvatnim zubnim nadoknadama i subjektivnim zadovoljstvom ispitanika. Slična ispitivanja izveli su i drugi autori [14, 15]. Takođe, novi trendovi u ovoj oblasti podrazumevaju ispitivanje subjektivne procene kao jednog od parametara određivanja indeksa osnovnog profila oralnog zdravlja [12, 13, 14]. Ova studija ukazuje na mogućnosti iznalaženja drugačijih merenja za određivanje mastikatornih performansi kod osoba s totalnim zubnim nadoknadama. Ovi stavovi imaju potvrdu i u radovima drugih autora [16, 17].

Vrednosti ovakvih ispitivanja su relevantne ukoliko se izvođe tokom perioda prilagođavanja pacijenta na zubnu protezu. Mnoga istraživanja daju podatke o trajanju ovog adaptacionog perioda od dve do dvanaest nedelja kod osoba s totalnim protezama [8, 18, 19, 20]. Razlike u rezultatima verovatno postoje zbog primene različite metodologije i različitih potreba istraživanja. Kako za procenu funkcionalne sposobnosti mastikatornog sistema nije neophodno dostizanje maksimalnih vrednosti, ovaj period je bio šest nedelja, jer je to optimalno vreme za postizanje višestruke adaptacije na novu nadoknadu.

Jednostavna pitanja o kvalitetu žvakanja kod ispitanika s poremećenom okluzijom kvalifikovala su ovu funkciju kao dobru, jer su se ispitanici već navikli na taj poremećaj. To istovremeno ne podrazumeva ni sve vrste hrane, niti potpuno i kvalitetno sažvakano hranu. Pravilna protetička rehabilitacija im omogućava kvalitetniju i raznovrsniju ishranu, te olakšava proces žvakanja, što je jedan od razloga promene u doživljaju mogućnosti žvakanja. Takođe, mnogi pacijenti rešavajući estetske probleme usled bezubosti, zanemaruju funkcionalne osobine tih nadoknada, prikazujući svoje žvakanje boljim nego što ono zaista jeste. U ovom istraživanju preduslovi za objektivnost rezultata bili su obavezna edukacija ispitanika o pravilnom procesu žvakanja, adekvatna informisanost u vezi s ispitivanjem i precizna i pravilna primena upitnika. Neprecizni upitnici, s nejasnim pitanjima i ručnom obradom podataka, neki su od propusta ranijih radova. Na primer, u radovima Guna (*Gunne*) i saradnika [21] i Hita (*Heath*) [22] pojedini odgovori, kao što su „sporije jedem” i „drugačije žvaćem”, svrstani su u kategoriju „loše žvakanje”, a zbog nepreciznih pitanja i rezultati su bili nepouzdan. Značaj ovoga vida ispitivanja leži u njegovoj primenljivosti

u svakodnevnoj kliničkoj praksi, a dodatni kvalitet je mogućnost uključivanja studenata koji, u sklopu svoje prakse, uzimajući anamnezu i sprovodeći ispitivanje pacijenata, takođe stiču dragocena znanja i veštine iz ove oblasti.

Primenjeni upitnik je obuhvatio i pitanja u vezi s različitom hranom koju pacijent konzumira (20 vrsta), što upotpunjuje sliku o stvarnom kvalitetu žvakanja. Neki autori su se bavili samo analizom žvakanja tvrde ili meke hrane [23] ili malim brojem vrsta hrane, što može ukazati na nerelevantne podatke. Treba naglasiti i činjenicu da je uobičajena ishrana savremenog čoveka izmenjena, da je više zastupljena mekša i polupreradena hrana, što takođe može biti uzrok neprecizne subjektivne procene žvakanja. To može biti razlog u razlikama rezultata između današnjih i ranijih istraživanja.

Odgovore starih osoba o subjektivnoj proceni kvaliteta žvakanja treba smatrati pogodnim pokazateljima mastikacije, a samim tim i funkcionalne sposobnosti mastikatornog sistema, samo ako je stabilno opšte zdravlje i ako ne postoje kranio-mandibularne disfunkcije, odnosno da su proteze urađene po principima bilateralno uravnotežene okluzije. Svi ovi faktori su povezani i međusobno zavisni, a kriterijumi za pokazivanje funkcionalne sposobnosti mastikatornog sistema su multifaktorski [16]. Ovako dobijenu subjektivnu procenu funkcionalne sposobnosti mastikatornog sistema primenjivali su kao

kriterijum i drugi autori, i dobili rezultate saglasne s nalazima ovoga istraživanja [24, 25].

Adaptacija na protezu je mnogo brža ako je odnos između terapeuta i pacijenta dobar. Dobijeni rezultati su bili u skladu s tim stavom, ali to nije uticalo na uspešnost lečenja. Uočeno je da između dve grupe ispitanika postoje razlike, ali one nisu bile statistički značajne. Uspeh protetičke terapije ipak umnogome zavisi od niza faktora, među kojima motivacija sigurno ima važnu ulogu.

ZAKLJUČAK

U svakodnevnom kliničkom radu jedan od osnovnih parametara uspešnosti protetičke terapije jeste pacijentova subjektivna procena. Zadovoljstvo protetičkom rehabilitacijom ne zavisi od pola. Subjektivna procena ispitanika o mastikaciji u sklopu protetičke rehabilitacije u skladu je sa zadovoljstvom ispitanika njihovim zubnim nadoknadama. Ova procena mastikacije je dragocena i može se koristiti kao važan parametar za ocenu uspešnosti lečenja uz strogo i precizno vođenu anketu. Ovaj vid procene uspešnosti lečenja treba kombinovati sa funkcionalnim testovima, jer se tada mogu dobiti i najpotpuniji i najrelevantniji podaci.