Psihogeni čimbenici u etiologiji stomatopiroze

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Sažetak

Stomatopiroza je stanje koje karakterizira osjećaj pečenja, žarenja i boli u ustima kod normalne oralne sluznice. Različiti etiološki čimbenici utječu na nastanak stomatopiroze. To su: sustavni, lokalni i psihogeni. U našem istraživanju dali smo veliku pozornost psihogenim čimbenicima kao uzroku nastanka stomatopiroze. Naše ispitivanje provedeno je na uzorku od 20 ispitanika sa simptomom stomatopiroze, bez kliničkog patološkog nalaza. Kod kontrolne skupine nalazimo istu životnu dob ali bez simptoma stomatopiroze i bez kliničkog oralnog nalaza. Testiranje je provedeno upitnikom općih podataka, upotrebom vizualne analogne ljestvice po Reed Petersonu, termoesteziometrijom te psihoupitnicima. Psihoupitnici su bili: test depresivnosti, adaptabilnosti, anksioznosti i test emocionalne stabilnosti. Rezultati su pokazali da nastanak stomatopiroze nalazimo u osoba starije životne dobi, uglavnom ženskoga spola. Lokacija simptoma najviše je zastupljena na usnama 70%, a zatim vrh jezika 20%. Opis simptoma nam govori da je više simptoma zastupljeno istodobno. U većini ispitanici smatraju intenzitet simptoma nepodnošljivim 50%, a srednje podnošljivim 20%.

Upitnicima je dokazano da u ispitanika sa stomatopirozom postoji depresija kod svih ispitanika od toga jaka u 70%, i jako prisutna anksioznost u 80%. U 60% ispitanika postoji slaba adaptabilnost, a emocionalna nestabilnost je u 70%. Ovaj nalaz upućuje da psihogeni čimbenik ima značajnu ulogu u etiologiji stomatopiroze.

Ključne riječi: *stomatopirosis, psihogeni čimbenici*

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Uvod

Sindrom "gorećih usta" karakterizira osjećaj pečenja, žarenja i boli u ustima kod normalne oralne sluznice. Danas se služimo različitim terminima kao "glosodinija", "stomatodinija", "stomatopiroza", "oralna dizestezija" (1,2).

Na nastanak sindroma "gorećih usta" utječu razni etiološki čimbenici. To su: lokalni, sustavni i psihogeni čimbenici (3). Lokalni etiološki čimbe-

ıici koji mogu izazvati različite simptome pečenja ısta su: umjetna zubala (4,5), kandidijaza i bakte-ijske infekcije usta (6), alergijske reakcije usta 7,8), disfunkcija TMJ i žlijezda slinovnica (9,10), eakcija sluznice nakon zračenja (11,12).

Niz sustavnih bolesti mogu utjecati na stanje ıralne sluznice. Takva patološka stanja se mogu ıčitovati kao subjektivni simptom pečenja usta.

Sustavni su čimbenici: manjak željeza i vitami-ıa, hormonalni i imunološki poremećaji te popratı učinak kod uzimanja lijekova. Brooke i Seganki (13) ustanovili su da pacijenti sa stomatopiro-om imaju manjak željeza. Nedostatak vitamina B_1, B_2, B_6, te posebni manjak njihove kombinacije, ızrokuje stomatopirozu (9,14, 15). Glick i sur. (16) isoku koncentraciju bjelančevine, kalija i fosfata ı krvi smatraju uzrokom promjena u usnoj šupljiıi koje se očituju kao stomatopiroza. Neurogeni i irkulatorni poremećaji koji se javljaju kod dijabeesa melitusa dovode do simptoma stomatopiroe(17).

Važnu ulogu u nastanku patoloških promjena ıa oralnoj sluznici i subjektivnih simptoma u ustina imaju psihogeni čimbenici. Feinmann i Harris 18) upozoravaju na povezanost bolova u usnoj upljini sa životom punim stresnih stanja i dugorajnih problema. Teške stresne okolnosti u privatıom životu Hammaren i Hugoson (19) smatraju ızrocima stomatopiroze. Hampft i sur. (20) otkrili u da u velikom postotku postoje blagi, umjereni i ızbiljni mentalni poremećaji te da njihov rezultat nože biti stomotopiroza. Psihoterapijskim razgoorima ustanovljeni su emocionalni čimbenici, nerijateljstvo i agresivnost u osoba sa stomatopiroom (9,21). Browning i sur. (22) zaključili su da lepresija i tjeskoba utječe na nastanak stomatopioze. Grushka i sur. (23) smatraju da su osobe sa tomatopirozom, osim što se više bave svojim tjesnim funkcijama nego uobičajeno, potištene, emoionalno otupjele, nepovjerljive, tjeskobne i društveno izolirane, te mogu imati reaktivne i egzoge-e depresije, ljutitost, usamljenost. Istraživanja lariranih depresija su pokazala da treba razlikovati italnu osjetljivost i psihomotornu inhibiciju koja e može očitovati tjelesnim simptomima na oralој sluznici, skeletnim mišićima te kardiovaskuarnom, gastrointestinalnom, vasovegetativnom, geito-urinarnom sustavu. Lamay i Lamb (9) ustanoili su da su duševni poremećaji, tjeskoba, depresija i kancerofobija jedan od glavnih etioloških čimbenika stomatopiroze. Testovima to potvrđuju mnogi autori (24,27,28,29,30).

Ovo je istraživanje provedeno sa svrhom da se dokaže povezanost psihogenih čimbenika u nastanku stomatopiroze, posebice u ratnim i poslijeratnim stresnim okolnostima psihičkih trauma sa svojim osnovnim sastavnicama: depresijom i tjeskobom. Također je izvršena procjena emocionalne stabilnosti i adaptabilnosti u ispitanika sa stomatopirozom.

Metode i materijali

Ispitivanje je provedeno na uzorku od 20 ispitanika sa subjektivnim simptomom stomatopiroze koji su liječeni na Zavodu za bolesti usta, Stomatološkog fakulteta u razdoblju od 1994.-1998. godine bez kliničkoga patološkog nalaza što je uvjet postojanje stomatopiroze kao zasebne dijagnoze. Kontrolna skupina sastojala se je od 20 ispitanika iste životne dobi bez kliničkih promjena i bez simptoma stomatopiroze.

Klinički je dio testiranja proveden na sljedeći način: uz uobičajene opće podatke određena je lokalizacija simptoma pečenja prema Reed Petersonu po WHO (31). Subjektivni intenzitet pečenja izražava se u cm prema vizualnoj analognoj skali (Slika 1) (VAS). Termoesteziometrijom je izmjerena temperatura na mjestu intenzivnog pečenja prema topografskoj shemi po Reed Petersonu (25).

0	5	10
bez piroze no pyrosis	srednji intenzitet mild pyrosis	jako pečenje severe pyrosis

Slika 1. *Prikaz vizualne analogne ljestvice*
Figure 1. *Visual analogue scale*

Psihološka testiranja provedena su s pomoću psiholoških upitnika.

Prvi upitnik se odnosi na ***DEPRESIVNOST,*** koja je procijenjena ljestvicom po Demangeu i sur. Ista ljestvica upotrebljena je pri raščlambi osoba sa stomatopirozom gdje je u većini ispitanika ustanovljena depresija (26).

Drugi je upitnik usmjeren na ***ADAPTABILNOST,*** a psihološka procjena je učinjena prema psihotestovima koje navodi Trikkas i sur. (30).

Treći upitnik ***ANKSIOZNOST*** proveden je prema Hamiltonovoj ljestvici anksioznosti (Rojo i sur.) (27).

Četvrti upitnik odnosi se na procjenu emocionalne stabilnosti, koji prikazuju Toune i Fricton (2).

Kliničku procjenu intenziteta, lokacije stomatopiroze, termoesteziometrijsko mjerenje i psihološke upitnike izvršila je ista osoba pod istim uvjetima za sve ispitanike.

Osim stomatološkog pregleda svi su bolesnici upućeni na psihijatrijsko psihoterapijski pregled.

Psihološku obradu proveo je psiholog po standardima određenih upitnika.

Statistička je obrada izvršena procjenom srednje vrijednosti svih testiranja i izražena je u postotcima.

Rezultati

Rezultati ispitivanja potvrđuju povezanost stomatopiroze s psihogenim poremećajima u našoj populaciji.

Distribucija prema zanimanju prikazana ja u Tablici 1. Ona pokazuje da su najčešće ispitanici umirovljenici. Također je tako i kod kontrolne skupine.

Dobni interval bio je od 56-75 godina. Distribucija prema dobi prikazana je na Tablici 2. Najveći broj ispitanika u dobi je od 66-70. godina, a kod kontrolne skupine od 61-65.

Tablica 1. *Distribucija prema zanimanju*
Table 1. *Distribution according to occupation*

	Ispitanici Examinees		Kontrolna skupina Control group	
Zanimanje - Occupation	broj/No	%	broj/No	%
Umirovljenici - Pensioners	10	50	16	80
Časne sestre - Nuns	2	10		
Domaćice - Housewifes	8	40	2	10
Službenici - Clerks			2	10
Ukupno - Total	20	100	20	100

Tablica 2. *Distribucija prema dobi*
Table 2. *Distribution according to age*

	Ispitanici Examinees		Kontrolna skupina Control group	
Godine - Years	broj/No	%	broj/No	%
55-60	4	20	2	10
61-65	2	10	10	50
66-70	8	40	6	30
Više od 70 - More than 70	6	30	2	10
Ukupno - Total	20	100	20	100

Lokalizacija simptoma na oralnoj sluznici prikazana na Tablici 4, pokazuje da su najčešći simptomi pečenja na usnama (70%), a zatim na vrhu jezika (20%).

U **opisu simptoma** u ispitanika najčešće je pečenje, a zatim svrbež, suhoća, probadanje i bol. Više je simptoma istodobno postojalo u istog ispi-

Tablica 3. *Distribucija prema spolu*
Table 3. *Distribution according to sex*

	Žene - Women		Muškarci - Men		Ukupno - Total	
	broj/number	%	broj/number	%	broj/number	%
Ispitanici - Examinees	18	90	2	10	20	100
Kontrolna skupina - Control group	16	80	4	20	20	100

Distribucija ispitanika po spolu prikazana je u Tablici 3. Kod ispitanika i kod kontrolne skupine najviše prevladavaju žene.

Klinički oralni nalaz pokazao je da ni u jednog ispitanika nema patoloških promjena na oralnoj sluznici, tj. **klinički oralni nalaz** je negativan u svih (100%) ispitanika.

Tablica 4. *Prikaz lokacije stomatopiroze*
Table 4. *Presentation of localization of stomatopyrosis*

Mjesto Place	Usne Lips	Vrh jezika Apex of tongue	Nepce Palate	Ukupno Total
Broj No (%)	14 (70)	4 (20)	2 (10)	20 (100)

tanika. Kontrolna skupina nije iskazivala takve simptome.

Procjena intenziteta pečenja prikazana je na Tablici 5. Ona pokazuje da polovica ispitanika simptom stomatopiroze smatraju nepodnošljivim.

Tablica 5. *Distribucija prema intenzitetu pečenja*
Table 5. *Distribution according to to intensity of burning*

Intenzitet pečenja Intensity of burning	Nepodnošljivo Intolerable	Srednje podnošljivo Mean tolerable	Podnošljivo Tolerable	Ukupno Total
Broj No (%)	10 (50)	4 (20)	3 (60)	20 (100)

Termoesteziometrijom nije u ispitanika ustanovljena povišena temperatura oralne sluznice, što dokazuje da u podlozi stomatopiroze nije upala.

Mjereći **subjektivni intenzitet simptom** prema VAS ljestvici, u većine je ispitanika postojalo jače pečenje. Ispitanici su ocjenjivali intenzitet pečenja na kontrolnoj skali od 0-10. Srednja vrijednost (s) iznosi 5,9.

Ocjena depresivnosti se primijenila i na ispitanicima i na kontrolnoj skupini. Rezultat toga ispitivanja prikazan je na Tablici 6. Depresivnost su pokazali ispitanici sa stomatopirozom i kontrolne skupine. Dobivena je razlika u intenzitetu depresije. Ona je izražena kao jaka u ispitanika sa stomatopirozom,a slaba u ispitanika kontrolne skupine.

Tablica 6. *Distribucija rezultata upitnika depresivnosti*
Table 6. *Distribution of the results of questionaire of depression*

Depresivnost Depression	Ispitanici Examinees	Kontrolna skupina Control group
Jaka - High	14 (70)	2 (10)
Srednja - Medium	4 (20)	2 (10)
Slaba - Low	2 (10)	16 (80)
Ukupno - Total	20 (100)	20 (100)

Upitnik adaptabilnosti također se je primjenjivao na ispitanicima i na kontrolnoj skupini. Njegov rezultat prikazan je na Tablici 7, pokazuje da je adaptabilnost ispitanika sa stomatopirozom slaba, a kontrolne skupine najčešće dobra.

Tablica 7. *Distribucija prema rezultatima testa adaptabilnosti*
Table 7. *Distribution according to the results of test of adaptability*

Adaptabilnost Adaptability	Ispitanici Examinees	Kontrolna skupina Control group
Slaba - Low	12 (60)	2 (10)
Srednja - Medium	4 (20)	4 (20)
Dobra - Good	4 (20)	14 (70)
Ukupno - Total	20 (100)	20 (100)

Tablica 8. *Distribucija prema rezultatima testa anksioznosti*
Table 8. *Distribution according to the results of test of anxiety*

Anksioznost Anxiety	Ispitanici Examinees	Kontrolna skupina Control group
Jaka - High	16 (80)	2 (10)
Srednja - Medium	2 (10)	6 (30)
Slaba - Low	2 (10)	12 (60)
Ukupno - Total	20 (100)	20 (100)

Upitnik za otkrivanje anksioznosti primijenjen je na ispitanicima sa stomatopirozom i na kontrolnoj skupini. Rezultati su prikazani na Tablici 8. Procijenjena je anksioznost u objema skupinama ispitanika. U ispitne je skupine jaka, a u kontrolne skupine je slaba.

Procjena rezultata emocionalne stabilnosti u ispitanika i kontrolne skupine. prikazana je na Tablici 9. Veći dio bolesnika sa stomatopirozom emocionalno je nestabilan, dok su ispitanici kontrolne skupine emocionalno stabilni.

Tablica 9. *Distribucija rezultata emocionalne stabilnosti*
Table 9. *Distribution of the results of emotional stability*

Emoc. stabilnost Emotional stability	Ispitanici Examinees	Kontrolna skupina Control group
Emoc. stabilni Emotional stability	6 (30)	16 (80)
Emoc. nestabilni Emotional instability	14 (70)	4 (20)

Rasprava

Stomatopiroza je bolest starijih ljudi, uglavnom ženskoga spola. To potvrđuje ovo istraživanje. Dob naših pacijenata je od 56-75 godina starosti. Pro-

sječna je starost 67 godina. J Bergdahl i Anneroth (1) imali su pretežno žene starije dobi (50-60) sa sindromom stomatopiroze, što se slaže s ovim istraživanjem. Po zanimanju su pretežno domaćice i umirovljenici. Basker i sur. (28) potvrđuju da su pretežno umirovljenici.

U sklopu same definicije bolesti ide činjenica da je to bolest bez kliničkog oralnog nalaza, što također smatraju Cekić-Arambašin i sur. (25). Simptomi su pretežito locirani u području dijela usnice i vrha jezika. Pečenje je dominantan simptom što je također dio dijagnostičkoga kriterija. Grushka i sur. (3) nalaze da je najčešće pečenje locirano na vrhu jezika i na nepcu. U većini ispitanika pečenje je nepodnošljivo i trajno. Dano je razdoblje kada se u većini ispitanika javlja simptom zbog toga jer su izloženi većim stresnim situacijama nego navečer i u noći. Proteza pojačava simptome. Zubne proteze, kao strano tijelo psihički osjetljivih osoba izaziva oralne simptome. Ako stabilnost proteze nije idealna, ona izaziva mehaničke iritacije koje se objektivno mogu očitovati kao bol i pečenje. Stare proteze i one s lošom higijenom mogu biti mjesto gdje se kolonizira gljivica iz soja *Candidae,* koje izazivaju stomatopirozu. Nater i sur. (4) upozoravaju na taj problem, kao i mnogi drugi autori (1,2,5). Emocionalna napetost gotovo u jednakoj mjeri intenzivira stomatopirozu, što je za naše istraživanje osobio važno. Taj nalaz potvrđuje Grushka i sur. (23). U većini slučajeva ispitanici se ne tuže za promjenu u okusu. Termoesteziometrijski nije ustanovljena upala, što ide u prilog nepostojanja oralnoga patološkog nalaza (25). Subjektivno većina ispitanika ima jači osjećaj pečenja, što upućuje na psihičke poremećaje. Depresija, slaba adaptabilnost, anksioznost i emoncionalna nestabilnost znatno su jače dokazane u ispitanika nego li u kontrolnoj skupini. Rojo i sur. (27) otkrili su s pomoću Hamiltonove ljestvice depresije i anksioznosti da u većine ispitanika sa stomatopirozom postoji depresija kao dominantni poremečaj što je prikazano u ovom istraživanju. Lamay i Lamb (29) pomoću HAD skale nalaze kod ispitanika depresiju, tjeskobu i bordeline ustroj. Trikkas i sur. (30) ispituju bolesnika sa simptomom stomatopiroze i s pomoću raznih psihometrijskih instrumenata nalaze psihopatološke simptome. Demange i sur. upotrebljavali su ljestvicu depresije u raščlambi osoba sa stomatopirozom i u većini ispitanika ustanovljena je depresija (26). Trikkas i sur. u svojem su istraživanju upotrebljavali razne vrste testova, među njima bio je i test adaptabilnosti. Ustanovljena je slaba adaptabilnost (30). Rojo i sur. s pomoću Hamiltonove ljestvice anksioznosti dokazuju anksioznost u osoba sa stomatopirozom (27). Toune i Frikton ustanovili su da u osoba sa stomatopirozom postoji emocionalna nestabilnost (2).

Zaključak

Na osnovi našeg istraživanja zaključujemo da je psihogeni čimbenik važan u nastanku stomatopiroze.Gotovo je 4/5 ispitanika neadaptirano te imaju tjeskobu i depresiju. Isti je broj emotivno nestabilan. Stomatopiroza može biti rezultat složene dinamike, od histerične konverzije do nesposobnosti mentaliziranja separacije kojemu je osnova "narcistički nukleus". Riječ je naime o nazočnosti aleksitimije. Ti rezultati određuju interdisciplinarno liječenje koje osim stomatološke terapije treba sadržavati i određenu vrstu psihoterapije koja će biti potrebna kod stomatopiroze. Moguće je primjenjivati različite psihoterapijske tehnike: psihoterapija relaksacijom, i to autogeni trening, psihoanalitički i bihevioralne. Uz to treba upotrijebiti psihofarmake s obzirom na navedene psihičke poremećaje benzodijazepine i antidepresive.

Poboljšavanje psihičke kvalitete života najvjerojatnije bi preveniralo stomatopirozu ili je izliječilo. Povećanu čestoću toga simptoma u nas potvrđuje njegovu etiologiju poslijeratnim stresom kao etiološkim čimbenikom.

Literatura

1. BERGDAHL J, ANNEROTH G. Burning mouth syndrome: literature review and model for research and management. J Oral Pathol Med 1993;22:433-438.
2. LUC P, TOUNE M, JAMES R, FRICTON. Burning mouth syndroma: critical review and proposed clinical management. Oral Surg Oral Med Oral Pathol 1992; 74:158-167.
3. GRUSHKA M. Clinical features of burning mouth syndrome. Oral Surg Oral Med Oral Pathol 1987;63:30-36.
4. NATER JP, GROENMANN H, WAKKENS-GARRITSEN BG, TIMER LH. Etiologic factors in denture sore mouth syndrome. J Prosth Dent 1978;40:367-373.
5. GORSKY M, SILVERMAN S, DHINN H. Burning mouth syndrome: a review of 98 cases. J Oral Med 1987;42:7-9.

6. KATZ JK, BENOLIEL R, LEVINER E. Burning mouth sensation associated with fusospirochetal infection in edentulous patients. Oral Surg Oral Med Oral Pathol 1986; 62:152-154.
7. JAMES J, FERGUSON MM, FERSYTH A. Mercuryallergy as a cause of burning mouth.Br Dent J 1985;159:392.
8. KAABER SV, THULIN H, MELSEN E. Skin sensitivity to denture base materials in the burning mouth syndrome. Contact Dermatol 1979;5:90-96.
9. LAMAY PJ, LAMB AB, FORSYTH A. Atypical burning mouth syndrome. Contact Dermatol 1987;17:242-243.
10. JONTELL M, HARALDSON T, PERSSSON L-O, OUHMAN SC. An oral and psyhosovcial examination of pation with presumed oral galgavism. Swed Dent J 1985; 9:175-185.
11. GLASS BJ, VAN DIS NL, LANGLAIS RP,MILES A. Xerostomia:diagnosis and treatment planning considerations. Oral Surg Oral Med Oral Pathol 1984;58:248-252.
12. MAIN DMG, BASKER RM. Patients complaining of the burning mouth: fertherexperiece in clinic assessement and menagement. Br Dent J 1983;154:206-211.
13. BROOKE RI, SEGANSKI DP. Aetiology and investigation of the sore mouth. J Can Dent Assoc 1977;10:504-506.
14. JACOBS A, CAVILL I. A oral lesions of iron deficiency anaenia: pyridoxine and riboflavin status. Brit J Haeman 1968;14:291-295.
15. FACCINI JM. Oral manifestation of vitamin B12 deficiency. Br J Oral Surgery 1968; 6:137-140.
16. GLICK D, BEN-ARYEH H, GETMAN D, SZARGEL R. Relation between idiopathic glossodynia and salivatory flow rate and content. Int J Oral Surg 1976;5 !61-165.
17. BRODY HA, PRENDERGAST JJ, SILVERMAN S. The relationship between oral symptoms, insulin release, and glucose intolerance. Oral Surg Oral Med Oral Pathol 1971;31:777-782.
18. FEINMAN C, HARRIS M. Psihogenic facial pain. Part 1: the clinical presentation. Br Dent J 1984;156:165-168.
19. HAMMAREN M, HUGOSON A. Clinical psyhiatric assessment of patients with burning mouth syngrome resisting oral treatment. Swed Dent J 1989;13:77-88.
20. HAMFT G, VIKKULA J, YLIPPAVALNIEMI P, AALBERG V. Psyhiatric disoders in orofacial dysesthesia. Int J Oral Maxillofac Surg 1987;16:402-407.
21. NESBITT WR, BRODY HA. Psyhosomatic oral problems. J Oral Med 1967;22:43-46.
22. BROWNING S, HISLOP S, SCULLY C, SHIRLAW P. The association between burning mouth syndrome and psyhosocoal disorders. Oral Surg Oral Med Oral Pathol 1987;64:171-174.
23. GRUSHKA M, SESSLE BJ, HOWLEY TP. Psyhofisical assessment of tactile pain and thermal sensory functions in the burning mouth syndrome. Pain 1987;28:169-184.
24. Van DER PLOEG HM, van DER WAAL N, EIJKMAN-MAJ, van DER WAAL I. Psyhological aspect of patients with burning mouth syndrome. Oral Surg Oral Med Oral Pathol 1987;63:664-668.
25. CEKIĆ-ARAMBAŠIN A, VIDAS I, STIPETIĆ-MRAVAK M. Clinical oral test for the assessment of oral symptoms of glossodynia and glossopyrosis. J Oral rehab 1990; 17:495-502.
26. DEMANGE C, HSSON C, POI-VET D, ESCANDE JP. Burning mourh syndrome and depression. A psyhoanalytic approth. Rev Stomatol Chir Maxillifac 1996;97(4):244--252.
27. ROJO L, SILVESTRE FJ, BAGAN JV, VICENTE T. Psyhiatric morbility in burning mouth syndrome.psyhiatric interview versus depression and scales. Oral Surg Oral Mrd oral Pathol 1993;75:308-311.
28. BASKER RM, STURDEEDW, DAVENPORT JC. Patients with burning mouth: a clinical investigation of causetive factors, including the climacteric. Br Dent J 1978;145:9--16.
29. LAMAY PJ, LAMB AB. The usefullness of the HAD scale in assessing anxiety and depression in patients with burning mouth syndrome. Oral Surg Oral Med Oral Pathol 1989;67:390-392.
30. TRIKKAS G, NIKOLATOU O, SAMARA C, BAZOPOULOU-KYRKANIDOU E, RABAVILAS AD, CHRITIDOULOU GN. Glossodynia:personality characteristics and psyhopatology. Psyhother Psyhosom 1996;65:163-168.
31. World Hearth Organization. Guide to epidemiology and diagnosis of oral mucosal diseases and conditions. Community Dentistry and Oral Epidemiology 1980;8:1.

Psychogenic Factors in the Etiology of Stomatopyrosis

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Summary

Stomatopyrosis is a condition characterised by a burning sensation and pain in the mouth with normal oral mucous membrane. Several etiologic factors influence the occurrence of stomatopyrosis: systemic, local and psychogenic. In our investigation we paid particular attention to psychogenic factors in the occurrence of stomatopyrosis. Our study was carried out on a sample of 20 subjects with a symptom of stomatopyrosis and without a clinical pathological finding. The control group were of the same age, without symptoms of stomatopyrosis and with no clinical oral finding. The test was carried out by a questionnaire on general data, use of a visual analogous scale according to Reed Peterson, a thermoesthesiometer and psycho-questionnaires. The psycho-questionnaires were: depression test, adaptability test, anxiety test and emotional stability test. The results showed the occurrence of stomatopyrosis in older subjects, primarily female. The location of the symptom was mainly on the lips in 70% and on the tip of the tongue in 20%. Description of symptoms indicate that more symptoms can occur simultaneously. The majority of subjects considered the intensity of symptoms unbearable (50%), and 20% moderately bearable. The questionnaires show that depression was present in all subjects with a symptom of stomatopyrosis, in 70% severe depression, and in 80% anxiety was also severe. Poor adaptability was found in 60% of subjects and emotional instability in 70%. The study indicates that the psychogenic factor has a significant role in the etiology of stomatopyrosis.

Key works: *stomatopyrosis, psychogenic factors*

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Introduction

"Burning mouth" syndrome is characterised by burning and pain in the mouth with normal oral mucous membrane. Today, various terms are used such as "glossodynia", "stomatodynia", "stomatopyrosis" and "oral dysesthesia" (1,2).

Various etiologic factors influence the occurrence of "burning mouth" syndrome: local, systemic and psychogenic (3). Local etiologic factors

which can cause different symptoms of burning mouth are: artificial teeth (4,5), candidiasis and bacterial oral infections (6), allergic oral reactions (7,8), dysfunction TMJ and salivary glands (9,10), reaction of mucous membrane after radiation treatment (11,12).

Numerous systemic diseases can affect the condition of the oral mucous membrane. Such pathological conditions may manifest as subjective symptoms of burning mouth.

Systemic factors are: lack of saliva, hormonal and immunological disorders, and side effects of certain medications. Brooke and Seganski (13) determined that patients with stomatopyrosis have a lack of iron. A lack of vitamins B_1, B_2, B_6 and particularly a lack of their combination, causes stomatopyrosis (9,14,15). Glick et al (16) consider that a high concentration of proteins, calcium and phosphate in blood is the cause of changes in the oral cavity, which manifest as stomatopyrosis. The neurogenic and circulatory disturbances which occur in diabetes mellitus lead to symptoms of stomatopyrosis (17).

Psychogenic factors have an important role in the occurrence of pathological changes on the oral mucous membrane and pathological subjective symptoms in the mouth. Feinmann and Harris (18) emphasise the correlation between pains in the oral cavity and stressful conditions and long-term problems in life. Stressful circumstances in private life are considered by Hammaren and Hugoson (19) to be causes of stomatopyrosis. Hampt et al (20) found that a high percentage of mild, moderate and severe mental disorders can result in stomatopyrosis. By means of psychotherapeutic interviews emotional factors, animosity and aggression were determined in persons with stomatopyrosis (9,21). Browning et al (22) concluded that depression and anxiety have an influence on the occurrence of stomatopyrosis. Grushka et al (23) consider that persons with stomatopyrosis, apart from the fact that they are more concerned with their bodily functions than usual, are depressed, emotionally indifferent, distrusting, anxious and socially isolated, and can have reactive and exogenic depression, anger and loneliness. Investigations of concealed depression have indicated the need to differentiate vital sensitivity and psychomotoric inhibition, which can result in physical symptoms on the oral mucous membrane, skeletal muscles and the cardiovascular, gastrointestinal, vasovegetative, genitourinary system. Lamay and Lamb (9) determined that mental disorders, anxiety, depression and cancerofobias are some of the main etiologic factors of stomatopyrosis. This has been confirmed in tests performed by many authors (24, 27, 28, 29, 30).

The present investigation was carried out with the aim of demonstrating correlation between psychogenic factors in the occurrence of stomatopyrosis, particularly in war and post-war stress situations of mental trauma, with its basic components: depression and anxiety. Estimation of emotional stability and adaptability was also performed in subjects with stomatopyrosis.

Methods and materials

The investigation was performed on a sample of 20 subjects with a subjective symptom of stomatopyrosis, treated in the Department of Oral Diseases of the School of Dental Medicine, during the period 1994-1998, with no clinical pathological finding, which is a condition for diagnosis of stomatopyrosis. The control group comprised 20 subjects of the same age, with no clinical changes and symptoms of stomatopyrosis.

The clinical part of the test was performed in the following way: normal general data on the locality of the symptom of burning, determined according to Reed Peterson, WHO (31). Subjective intensity of burning was expressed in cm, according to a visual analogous scale (Fig. 1) (VAS). Temperature was measured by a thermoesthesiometer at the site of intensive burning, according to a topographic scheme by Reed Peterson (25).

Psychological testing was carried out by means of psychological questionnaires. The first questionnaire related to DEPRESSION, which was assessed on a scale according to Demange et al. The same scale was used for analysis of persons with stomatopyrosis, in whom depression was determined in the majority of subjects (26).

The second questionnaire related to ADAPTABILITY, and psychological assessment was performed according to psycho-tests presented by Trikkas et al (30).

The third questionnaire ANXIETY was carried out according to Hamilton's scale for anxiety (Rojo et al) (27).

The fourth questionnaire related to assessment of emotional stability, as presented by Tourne and Fricton (2).

Clinical assessment of intensity, location of stomatopyrosis, thermoesthesiometric measurements and psychological questionnaires was carried out by the same persons and under the same conditions for all subjects.

Apart from a dental examination all patients was sent for a psychiatric-psychotherapeutic examination.

Psychological analysis was performed by a psychologist according to the standards of the determined questionnaires.

Statistical analysis was carried out by assessment of mean values of all tests and expressed in percentages.

Results

The results of the investigation confirm correlation between stomatopyrosis and psychogenic disturbances in our population. Distribution according to occupation is shown in Table 1, and shows that the most frequent subjects were pensioners. This was also the case in the control group.

The age range was 56-76 years. Distribution according to age is shown in Table 2. The majority of subjects were aged from 66 to 70 years, and in the control group from 61 to 65 years.

Distribution of subjects according to sex is shown in Table 3. In both the examined subjects and the control group women were predominant. Clinical oral finding indicated that none of the subjects had pathological changes on the oral mucous membrane, i.e. clinical oral finding was negative in all (100%) subjects.

Localisation of symptoms on the oral mucous membrane presented in Table 4 shows that the most frequent symptom was burning on the lips (70%), followed by burning on the tip of the tongue (20%).

In the Description of symptoms burning was most frequent, followed by itching, dryness and pain. In one subject several symptoms occurred at the same time. The control group did not show such symptoms.

Assessment of the intensity of burning is shown in Table 5. Half the subjects considered the symptom of stomatopyrosis to be unbearable.

No increase in temperature of the oral mucous membrane was determined by thermoesthesiometry, which demonstrates that the basis of stomatopyrosis is not inflammation.

Measurement of subjective intensity symptom, according to the VAS scale, showed severe burning in the majority of subjects. The intensity of burning was assessed by the subjects themselves, on a control scale of 0-10. Mean value (s) amounted to 5.9.

Assessment of depression was made in the subjects and the control group, and the result of this examination is presented in Table 6. Depression was found in subjects with stomatopyrosis and the control group. Difference in the intensity of depression was obtained, which was expressed as severe in subjects with stomatopyrisos and mild in subjects in the control group.

The adaptability questionnaire was applied to examined subjects and subjects in the control group. The result is presented in Table 7 and shows that adaptability of subjects with stomatopyrosis was poor and in the control group most frequently good.

The questionnaire on detection of anxiety was applied to subjects with stomatopyrosis and the control group and results are shown in Table 8. Anxiety was assessed in both groups of subjects. In the examined group it was severe in the control group mild.

The questionnaire on emotional stability was applied to the examined subjects and the control group and results are presented in Table 9. The majority of patients with stomatopyrosis were emotionally unstable, while the majority of subjects in the control group were emotionally stable.

Discussion

Stomatopyrosis is a disease of older persons, mainly female, which was confirmed in this investigation. The age range of our patients was from

56 to 75 years, mean age 67 years. In their study J. Bergdah and Anneroth (1) also found that older women predominated, aged from 50 to 60 years, with the syndrome stomatopyrosis, which agrees with this investigation. According to their occupation they were mainly housewives and pensioners. Basker et al (28) confirm that they are usually pensioners.

The disease is without a clinical oral finding, which was also the opinion of Cekić-Arambašin et al (25). Symptoms are mainly located in the area of the lips and the tip of the tongue. Burning is the dominant symptom, which is also a part of diagnostic criteria. Grushka et al (3) found that the tip of the tongue and the palate were the most frequent locations of the burning. In the majority of subjects burning is unbearable and constant. Daytime is the period when the symptom occurs in the majority of subjects, due to the fact that they are exposed to greater stress situations than in the evening and night. Dentures intensify the symptoms. Dentures, as a foreign body, cause oral symptoms in mentally sensitive persons. If the stability of the denture is not ideal, it causes mechanical irritation, which manifests as pain and burning. Old dentures and those with poor hygiene can be a site where fungus of the genus *Candida* may colonise, which causes stomatopyrosis. Nater et al (4) and many other authors (1,2,5) stress this problem. Emotional tension intensifies stomatopyrosis, which was particularly significant in our investigation. This finding agrees with that of Grushka et al (23). In most cases subjects do not complain of altered sense of taste. Inflammation was not determined by thermoesthesiometry, which indicates no oral pathological finding (25). Subjectively, the majority of subjects had a strong burning sensation, which indicates mental disturbance. Depression, poor adaptability, anxiety and emotional instability were found significantly more frequently in the examined subjects than in the control group. By using Hamilton's scale of depression and anxiety Rojo et al (27) determined that in the majority of subjects with stomatopyrosis depression is present as a dominant disturbance, which was also demonstrated in this investigation. Lamay and Lamb (29) used the HAD scale and found depression, anxiety and borderline constitution in subjects. Trikkas et al (30) examined patients with a symptom of stomatopyrosis, and by using various psychometric instruments found psycho-pathological symptoms. Demange et al used a scale of depression in an analysis of persons with stomatopyrosis, and depression was determined in the majority of subjects (26). In their investigation Trikkas et al used different types of tests, among which was adaptability test, by which poor adaptability was determined (30). By means of Hamilton's scale Rojo et al demonstrated anxiety in persons with stomatopyrosis (27). Toune and Frikton determined emotional instability in persons with stomatopyrosis (2).

Conclusion

On the basis of our investigation it can be concluded that psychogenic factor is important in the occurrence of stomatopyrosis. Almost 4-5 subjects were not adapted, with anxiety and depression. The same number were emotionally unstable. Stomatopyrosis may be a result of complex dynamics, from hysterical conversion to incapability of mental separation, the basis of which is "narcissistic nucleus". Namely, it is a case of alexitimia. The results determine interdisciplinary treatment which, apart from dental therapy, should include the appropriate psychotherapy for stomatopyrosis. The application of various psychotherapeutic techniques is possible: psychotherapeutic relaxation, autogenic training, psychoanalytic and behavioural. Psycho-pharmacotherapy should also be used for mental disturbances, benzodiazepin and antidepressants. Improvement of the mental quality of life would most probably prevent the occurrence of stomatopyrosis or cure it. The increased occurrence of this symptom in Croatia confirms its etiology in post-war stress as an etiological factor.