BURNING MOUTH SYNDROME: PSYCHOLOGICAL ASPECTS OF SOUTHERN BRAZIL INDIVIDUALS

SÍNDROME DA ARDÊNCIA BUCAL: ASPECTOS PSICOLÓGICOS DAS PESSOAS DO SUL DO BRASIL

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ABSTRACT

To investigate, by the Self Reporting Questionnaire (SRQ-20), recommended by the World Health Organization (WHO), the possible influence of emotional overload and minor psychiatric disorders in patients with Burning Mouth Syndrome (BMS). Forty patients with BMS were evaluated, both genders, selected from the data bank of the Center for Diagnosis of Diseases of the Mouth, School of Dentistry, Federal University of Pelotas (Brazil). The instrument Self Reporting Questionnaire (SRQ-20) was used in this study to detect minor psychiatric disorders and emotional overload in general population. Besides the SRQ-20 questionnaire, it also was applied an attachment composed by 8 closed questions to evaluate the stressing events lived by the patients in the last 12 months and the emotional overload suffered by them. The chi-square test, t-test were used for mono factor analysis. A probability of $p \leq 0.05$ was accepted as significant. Data were processed in SPSS version 14.0.1 for Windows. Women with average age of 61 years old were most affected. Approximately 90% of patients declared to feel nervous, tense and worried daily. From these, 67,5% related the beginning of BMS or its exacerbation with stress. The results suggest that depressive symptoms, anxiety and stress are factors that can be associated to BMS etiology. However, controlled studies are necessary to confirm these results.

Keywords: burning mouth syndrome; anxiety; stress; depressive symptoms.

RESUMO

Investigar, por meio do instrumento Self Reporting Questionnaire (SRQ-20), preconizado pela Organização Mundial da Saúde (OMS), a possível influência da sobrecarga emocional e transtornos psiquiátricos menores em pacientes portadores de síndrome da ardência bucal (SAB). Avaliaram-se 40 pacientes com SAB, de ambos os sexos, selecionados no banco de dados do Centro de Diagnóstico de Doenças da Boca da Faculdade de Odontologia da Universidade Federal de Pelotas, Rio Grande do Sul, Brasil. Utilizou-se o instrumento SRQ-20 para detectar distúrbios psiquiátricos menores e sobrecarga emocional na população geral. Além do SRQ-20, também se aplicou um anexo composto por oito questões fechadas para avaliar os eventos estressantes vividos pelos pacientes nos últimos 12 meses e a sobrecarga emocional sofrida por eles. Os dados foram processados com o programa estatístico SPSS versão 14.0.1. Realizou-se estatística descritiva (média aritmética, desvio padrão e porcentagens) e analítica para a comparação das variáveis. Utilizou-se o teste t de Student para a comparação de médias e para a comparação de variáveis qualitativas utilizou-se o teste Qui-quadrado. Considerou-se como nível mínimo de significância o valor de $p \leq 0.05$. Mulheres com média de idade de 61 anos foram mais acometidas em relação aos outros indivíduos avaliados. Aproximadamente 90% dos pacientes afirmaram sentir-se nervosos, tensos e preocupados no seu dia a dia. Dentre esses, 67,5% relacionavam o início da SAB ou sua exacerbação com o fator estresse. Sintomas depressivos, ansiedade e estresse são fatores que podem estar associados à etiologia da síndrome da ardência bucal, sendo necessários estudos controlados para comprovar esses resultados.

Palavras-chave: síndrome da ardência bucal; ansiedade; estresse; sintomas depressivos.

1. INTRODUCTION

The burning mouth syndrome (BMS) is an oral disorder that consists of a burning pain in the mouth without any visible clinical manifestations: its etiology is still unclear and the etiological factors have been classified as local, systemic and psychogenic (BRAILO *et al*., 2006; CAVALCANTI & SILVEIRA, 2009; CHERUBINI *et al*., 2005; CURANI, 1995; DANHAUER *et al*., 2002; FEMIANO, GOMBOS & SCULLY, 2004; SALORT-LLORCA, MÍNGUEZ-SERRA & SILVESTRE, 2008; SOARES *et al*., 2005). This condition affects primarily females, with prevalence increasing with age, particularly following menopause, at 55-60 years and being rare under 30 years (DANHAUER *et al*., 2002). Treatment is palliative and aim, mainly, to eliminate local or systemic factors, which can aggravate the symptoms (CHERUBINI *et al*., 2005).

Studies have shown that the psychological profile of patients with BMS follows a pattern, as the majority of patients show problems of psychogenic origin (ABETZ & SAVAGE, 2009; AMENÁBAR *et al*., 2008; BERGDAHL & ANNEROTH, 1993; GAO *et al*., 2009; SILVESTRE-DONAT & SERRANO-MARTINEZ, 1997). It is not rare to listen complains from the patients that are frequently frustrated and have accumulated anxiety because they searched help from several professionals without any solution to their cases. Before a specific treatment, the patient searches a diagnosis. As patients can be considered cancerophobia, to prove the absence of malignity sensibly contributes to improve their emotional state (SCALA *et al*., 2003).

This study aimed to evaluate, by Self Reporting Questionnaire (SRQ-20), the possible influence of emotional overload and minor psychiatric disorders in patients with Burning Mouth Syndrome (BMS).

2. METHODOLOGY

Forty individuals participated in this study. They were diagnosed with the BMS in the Center for Diagnosis of Diseases of the Mouth, School of Dentistry, Federal University of Pelotas (Brazil). This research was approved by Research Ethics Committee of the Federal University of Pelotas. After agreeing with the study, all the patients were called to clinic reevaluation.

A medical record was fulfilled for each patient with identification data, medical history, drugs used, tobacco use and alcohol. Also, the use of total or partial removable prosthesis was registered. After anamnesis, the intraoral physical examination was realized. Diagnosis of BMS was based on a clinical history of continuous oral burning or pain sensation throughout all or part of the day, on a daily or almost daily basis, for over 4 months, without paroxysms and in the absence of any abnormalities capable of justifying the symptoms.

The instrument Self Reporting Questionnaire (SRQ-20), recommended by World Health Organization (WHO), was used in this study to detect minor psychiatric disorders and emotional overload in general population. In Brazil, this questionnaire was validated by Mari and Williams (1985). It is composed by 20 closed questions, answer yes/no: four about physical symptoms and 16 about psycho-emotional disturbances. These questions were designed especially to physical and emotional symptoms that accompany the minor psychiatric disorders (frequent headache, insomnia, sadness, depression, stress) (ALMEIDA *et al*., 1997; MARI & WILLIAMS, 1985, 1986). Besides the SRQ-20 questionnaire, it also was applied an attachment composed by 8 closed questions to evaluate the stressing events lived by the patients in the last 12 months and the emotional overload suffered by them.

All the data obtained were transferred to a data bank and analyzed statistically in SPSS 14.0.1 for Windows (SPSS® Inc. Chicago, Illinois, USA). The chi-square test, t-test were used for monofactor analysis. A probability of $P \leq 0.05$ was accepted as significant.

3. RESULTS

Of the 40 cases with BMS, 36 (90%) were women and 4 (10%) men. The mean age of subjects with BMS was 60.27 ± 11.54 years, and the range was 25-81 years. Table 1 shows the distribution according to patient age and gender ($p > 0.05$).

Considering xerostomia and drugs, among the 17 individuals that used tricyclic antidepressants, benzodiazepines and/or antipsychotic drugs, 11 from these (67.7%) related mouth dryness sensation. From the patients, 27.5% related xerostomia and used psychiatric drugs. Considering these data, there was no association between variables ($p = 0.22$). Ten patients (25%) related to have psychiatric disease diagnosed by habilitated professional. Other systemic alterations are shown in Table 2.

Considering the used drugs, 17 individuals declared to use psychotropic drugs, however, only 10 from these patients related to have some psychiatric alteration (Table 3).

Table 1: Distribution according to patient age and gender. Pelotas – Rio Grande do Sul, Brazil/2009

	n (%)	X ± PD (years)
Female	36 (90%)	61,05 ± 11,62
Male	4 (10%)	53,25 ± 09,21
Total	40 (100%)	60,27 ± 11,54
p = 0.20		

Table 2: Patients distribution according to systemic alterations. Pelotas – Rio Grande do Sul, Brazil/2009

	Frequency (%)
Cardiovascular	12,5
Hormonal	2,5
Hormonal + others	30,0
Gastric	7,5
Gastric + others	15,0
Psychiatric	25,0
No alteration	7,5
Total	100%

Table 3: Distribution of patients percentage according to used drugs. Pelotas – Rio Grande do Sul, Brazil/2009

	Frequency (%)
Cardiovasculars	22,5
Psychotropic	42,5
Anti acids	15,0
Do not use	15,0
Others	5,0
Total	100

In our sample, 90% of individuals declared to feel nervous, tense and worried diary and 40% related to be apathetic when realizing diary activities. More than a half (74.07%) of patients related the appearing of symptoms or their exacerbation while stressing events occurred in their lives, declaring to feel constantly sad. Also, 70.23% of these subjects declared to be undecided. Otherwise, among the patients that do not identificate a possible cause to the beginning of BMS, only 23.07% declared to be undecided (p = 0.013). Data like these highlight the influence perceived by the patients themselves, the facts that can intervene on their psychological state and the emergence and/or exacerbation of symptoms.

The death of a close person was related by 32.5% of individuals, as well as unemployment and the presence of a family person with chronic disease at home, situations related by 22.5% and 27.5%, respectively. The frequent cry was related by 37.1% among who answered yes in question 28. Considering insomnia and sadness, it was observed that all individuals which suffered of insomnia, showed also sadness, making evident an association between these variables (Table 4).

Table 4: Relation between sadness and insomnia in patients with BMS Pelotas – Rio Grande do Sul, Brazil/2009

	Insomnia n (%)	Do not suffer with insomnia n (%)
Sadness	27 (96.4%)	0 (0%)
Without sadness	1 (5.6%)	12 (100%)
Total	28 (100.0%)	12 (100%)

$\chi^2 = 31.34$; p = < 0.001

4. DISCUSSION

BMS is a syndrome of complex and multifactorial origin (Bergdahl & Bergdahl, 1999; Brailo *et al*. 2006; Cavalcanti & Silveira, 2009; Cherubini *et al*., 2005; Danhauer *et al*., 2002; Salort-Llorca, Mínguez-Serra & Silvestre, 2008). Epidemiological data show a prevalence between 0.002% to 7.9% in the general population (Bergdahl & Bergdahl, 1999; Hakeberg *et al*., 1997; Palacios-Sanchez, Jordana-Comín & García-Sivoli, 2005). The female gender (90%) predominated in our sample, corresponding to the frequency found in other studies (Amenábar *et al*., 2008; Cavalcanti & Silveira, 2009; Eguia-del-Valle *et al*., 2003; Soares *et al*., 2005; Soto-Araya, Rojas-Alcayaga & Esguep, 2004).

In this study, 52.5% of patients related xerostomia. According to Ilzarbe, Poveda and Ilzarbe (2005), xerostomia can be secundary to emotional disorders or tobacco use. Bergdahl, Bergdahl and Johansson (1997), and Bergdahl and Bergdahl (2000) studies relate that the mouth dryness sensation in patients was related to high levels of anxiety or some psychological disorder, as depression. It is possible to contemplate the hypothesis that stress or anxiety can cause xerostomia and mouth burning sensation, according to Amenábar *et al*. (2008).

Among the evaluated individuals, 42.5% used drugs to psychiatric problems, 15% to gastric problems and,

in less quantity, 5% were treated for cardiovascular problems. Several patients ingested drugs, as in Bergdahl and Bergdahl (1999) study relating the own characteristics of patients with BMS. Normally elderly people and with multiple diseases it is judged that there is a diversity of drugs being ingested by them.

It was observed that 1 in 4 patients related interference in sleep because exacerbation of symptoms. Unfortunately, it is noticed that this data is not considered in many studies. This point is important since the sleep interference can aggravate the symptoms of BMS, altering stress and anxiety levels of the patient.

These results agree with Curani (1995), Silvestre-Donat and Serrano-Martinez (1997), Femiano, Gombos and Scully (2004) and Soto-Araya, Rojas-Alcayaga and Esguep (2004) ones since they considered important the psychic factors in BMS etiology. Among patients of our research, similar proportions declare to feel sad and suffered of insomnia (70% and 67.5%, respectively). Researches demonstrated that these individuals show an anxious, stressed and depressive profile developing burning and pain symptoms (AMENÁBAR *et al*., 2008; CHERUBINI *et al*., 2005; CURANI, 1995; FEMIANO, GOMBOS & SCULLY, 2004; SOARES *et al*., 2005; SOTO-ARAYA, ROJAS-ALCAYAGA & ESGUEP, 2004).

Soares *et al.* (2005) verified the prevalence of 65% of anxiety and 60% of depression among patients with BMS, against 42.5% of anxiety and 37.5% of depression in control group, showing that the patients with BMS present a psychological profile different from general population. Femiano, Gombos and Scully (2004) related that events that preceded the beginning of symptoms in patients were usually related to significant losses or changes in their lives. In all individuals of the study, it was possible to associate the exacerbation of symptoms with an interpersonal conflict.

Bergdahl, Anneroth and Perris (1995), evaluating 32 individuals with BMS, verified that patients who showed a higher tendency to muscle tension and anxiety had problems to make decisions, socialize and showed significant differences considering personality and psychological function, suggesting that burn symptoms are psychosomatic in these patients. In depressed patient, the mouth is a conflict area, related to necessity frustration (mainly physiological), also being an area where associated symbolic expressions of fault are somatized. In mouth occurs somatization of previous conflicts (FEMIANO, GOMBOS & SCULLY, 2004). According to Curani (1995), when these patients must face stressing situations, they have not a strong psychic structure, and, so, get depressed and fall sick. This is the manner to show what they feel, not being sad or anguish, but making the body sick, somatize the problem, which have the higher risk in prognostic.

Not all people somatize the stress as mouth burn. The arising of symptoms can be explained as follows: when stress and anxiety level get higher, also increase the incapacity of individual to handle with negative aspects and can develop the symptoms because emotional problems (HAKEBERG, HALLBERG & BERGGREN, 2003). This reaction indicates the somatization as a method used by organism to face the emotional stress.

5. CONCLUSION

The results suggest that the depressive symptoms, anxiety and stress are factors that can be associated to BMS etiology**.** It is fundamental to realize controlled and multicenter studies aiming to verify the real relation between Burning Mouth Syndrome and psychogenic factors that can be related to its etiology.

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