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DIFFERENTIAL DIAGNOSIS IN ATYPICAL FACIAL PAIN

A clinical study

José Cláudio Marinho Nóbrega[1], Silvia Regina Dowgan Tesseroli de Siqueira[2], José Tadeu Tesseroli de Siqueira[3], Manoel Jacobsen Teixeira[4]

ABSTRACT - *Objetive:* To evaluate a sample of patients with atypical facial pain (AFP) in comparison to patients with symptomatic facial pain (SFP). *Method:* 41 patients with previous diagnostic of AFP were submitted to a standardized evaluation protocol, by a multidisciplinary pain team. *Results:* 21 (51.2%) were considered AFP and 20 (48.8%) (SFP) received the following diagnosis: 8 (40.0%) had temporomandibular disorders (TMD); 3 (15.0%) had TMD associated to systemic disease (fibromyalgia, systemic erythematosus lupus); 4 (20.0%) had neuropathy after ear, nose and throat (ENT) surgery for petroclival tumor; 2 (10.0%) had Wallenbergsyndrome; 1 (5.0%) had intracranial tumor; 1 (5.0%) had oral cancer (epidermoid carcinoma), and 1 (5.0%) had burning mouth syndrome (BMS) associated to fibromyalgia. Spontaneous descriptors of pain were not different between AFP and SFP groups (p=0.82). Allodynia was frequent in SFP (p=0.05) and emotion was the triggering factor most prevalent in AFP (p=0.06). AFP patients had more traumatic events previously to pain (p=0.001). *Conclusion:* AFP patients had more: a) traumatic events previously to pain onset, and b) emotions as a triggering factor for pain. These data support the need of trained health professionals in multidisciplinary groups for the accurate diagnosis and treatment of these patients.

KEY WORDS: atypical facial pain, orofacial pain, facial pain, trigeminal neuralgia, tumor, temporomandibular disorders.

Diagnóstico diferencial em dor facial atípica: estudo clínico

RESUMO - *Objetivo:* Avaliar uma amostra de pacientes com dor facial atípica (DFA) e compará-la a outra com dor facial sintomática (DFS). *Método:* 41 pacientes com diagnóstico prévio de DFA foram submetidos a um protocolo padronizado de avaliação aplicado por uma equipe multidisciplinar. *Resultados:* 21 (51,2%) foram mantidos com o diagnóstico de DFA e 20 (48,8%) (DFS) receberam os seguintes diagnósticos: 8 (40.0%) tinham disfunções temporomandibulares (DTM); 3 (15,0%) tinham DTM associada a doença sistêmica (fibromialgia, lupus eritematoso sistêmico); 4 (20,0%) tinham neuropatia após cirurgia otorrinolaringológica (ORL) para tumor petroclival; 2 (10,0%) tinham síndrome de Wallenberg; 1 (5,0%) tinha um tumor intracraniano; 1 (5,0%) tinha câncer oral (carcinoma epidermóide), e 1 (5,0%) tinha síndrome da ardência bucal (SAB) associada à fibromialgia. Expressões espontâneas utilizadas para a dor não diferiram entre os 2 grupos (p=0,82). Alodínia foi freqüente nos doentes com DFS (p=0,05) e emoções foi o fator desencadeante mais comum no grupo com DFA (p=0,06). Doentes com DFA apresentaram mais eventos traumáticos anteriores ao início da dor (p=0,001). *Conclusão:* Pacientes com DFA apresentaram mais: a) eventos traumáticos anteriores à cirurgia e b) emoções como fator desencadeante de dor. Estes dados realçam a necessidade de profissionais treinados em dor nas equipes multidisciplinares para o diagnóstico preciso e tratamento adequado desses doentes.

PALAVRAS-CHAVE: dor facial atípica, dor orofacial, dor facial, neuralgia do trigêmeo, tumor, articulação temporomandibular.

Pain Center of the Neurological Division and Experimental Neurosurgery Division of the Psychiatric Institute, Hospital das Clínicas, Medical School, University of São Paulo, São Paulo, Brazil: [1]MD, McS, Pain Center, Neurological Division of Hospital das Clínicas of Medical School of University of São Paulo; [2]DDS, Post-graduation Student, Orofacial Pain Clinic, Dentistry and Neurology Divisions, Central Institute, University of São Paulo; [3]DDS, PhD, Head of Orofacial Pain Clinic of Dentistry Division of Hospital das Clínicas of Medical School of University of São Paulo; [4]MD, PhD, Head, Pain Center, Neurology Division and Experimental Neurosurgery Division, Psychiatric Institute, Medical School of University of São Paulo.

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Dr. José Tadeu Tesseroli de Siqueira - Rua Maria Cândida 135 - 02071-010 São Paulo SP - Brasil. E-mail: jtts@uol.com.br

Facial pain is frequent in the general population, and was present in 22% during the last 6 months before the study in 1997 at the USA[1]. There is a great variability of kinds of facial pain, including odontalgias, neuralgias, infections, tumors[2], temporomandibular disorders (TMD), sinusopathies, and atypical pain. Besides, the face is a common target of referral pain from head and neck[3], or even thorax[4]. Atypical facial pain (AFP) constitutes a diverse group and it is a motive of controversy during the classification[5]. It might present deep and localized pain in a limited area or in both sides of the face, often in the maxillary area, and it is often associated to cervical or mandibular localized pain without any neurological abnormalities[6,7]. AFP may also be described as burning, vague pressure or cramp at the innervation territory of the trigeminal or cervical nerves, and it is usually present in women with evident psychological disturbances without altered imaging or laboratorial exams[8,9]. Cold, fatigue, anxiety and depression can intensify pain[10], and there are no triggering factors, which are present in trigeminal neuralgia[8]. Rarely, it installs and subtly disappears[10].

AFP is a term used for persistent facial pain with no typical characteristic of cranial neuralgias from groups 11 and 12 of International Headache Society classification[11], and not associated to physical evidence or demonstrable organic causes. Other classifications eliminated this term as it is considered actually a painful condition at the craniofacial segment with difficult differential diagnosis. Nowadays this denomination has been widely used and it is considered an exclusion diagnosis, which turns to fundamental the history and deep examination of the patient to clarify the nature of his disease[12,13]. Despite of the improvement of the education of professionals including precise diagnosis for a wide variety of painful diseases, there are still patients with an undefined diagnosis and constant facial pain that, by exclusion, are denominated AFP[14-16]. Some international classifications exclude completely this diagnosis[17,18], while others change its description[11]. On the other hand, dental and medical specialists in facial pain have different criteria in investigation of AFP, without unified approach[19]. Previous studies of our group showed that with a standardized diagnostic protocol consisting by a systematic interview and examination is possible to get a precise diagnostic in patients with persistent facial pain[12], and that oral cancer often has an atypical presentation[20]. Recently, a study showed that a systematic approach of idiopathic orofacial pain allows a better diagnostic specificity[21]. However, despite innumeral published revisions about AFP complexity, clinical studies showing differential diagnosis criteria are rare.

Thus, the goal of this study was to evaluate a sample of patients with previous diagnosis of atypical facial pain that were referred to a pain clinic of a large teaching hospital, in order to identify the general characteristics of the sample and to make differential diagnosis with other facial pain syndromes.

METHOD

Patients' selection – Forty-one consecutive patients who had previous diagnosis of AFP were interviewed at the Pain Clinic of the Neurological Division from Hospital das Clínicas, Medical School, University of São Paulo. They were new patients and were evaluated between November 2000 and December 2001 at the Pain Clinic. After the clinical interview, a clinical examination was performed by two trained professionals: a neurologist and a dentist.

Clinical evaluation – The diagnostic protocol consisted of a standardized interview including patients' history and a clinical systematic evaluation of the cervical, cranial, facial, dental and other oral structures: a) patients' referral, b) age and gender, c) pain duration, d) affected facial side, trigeminal branches involved and associated signs, e) spontaneous pain description, f) pain interference in normal daily activities, g) occurrence of comorbidities and previous treatments, and h) neurological exam.

Radiographic and laboratory exams – All patients underwent jaw ortopanthomography, conventional radiography of the maxillary sinus, computed tomography (CT) with or without contrast, magnetic resonance image (MRI) of the cranial and facial region, and laboratory tests for hepatic function, inflammatory diseases, blood cell count, haemosedimentation velocity (HSV), seric creatinine, glicemia and reactive C protein.

Differential diagnosis and classification criteria for AFP – The final diagnosis of AFP was made in accordance to the International Headache Society[11] criteria. The patients with AFP-like symptoms and signs that after evaluation had other final diagnosis were called symptomatic facial pain (SFP). These patients were classified in accordance with the criteria of the International Association for the Study of Pain (IASP)[17], references of the American Academy of Orofacial Pain[18] and the International Headache Society classification[11,17,18].

Study groups – According the final diagnosis, patients were divided into 2 groups: a) atypical facial pain (AFP): 21 patients (51.2%) and; b) symptomatic facial pain (SFP): 20 (48.2%).

Treatment – Patients received the appropriate treatments after achieving the final diagnosis. No further commentary regarding treatment of diseases was included in this study as these patients were referred out of the study.

Statistical analysis – Student's t test was used on quantitative variable and the chi-square test (Pearson's test and Fisher's exact test for small expected frequency) was used to compare data on qualitative variables.

This study was approved by the Ethics Committee of the hospital, and the patients signed the informed consent.

RESULTS

General characteristics of the sample – Forty-one consecutive patients were evaluated, 27 (65.9%) women and 24 (34.1%) men; 21 (51.2%) with AFP diagnosis and 20 (48.8%) with the following SFP diagnosis: temporomandibular disorders (TMD) in 8 (40.0%); TMD associated to systemic disease (fibromyalgia, systemic erythematosus lupus) in 3 (15.0%); neuropathy after ear, nose and throat (ENT) surgery of petroclival tumor in 4 (20.0%); Wallenbergsyndrome in 2 (10.0%), intra-cranial tumor in 1 (5.0%); oral cancer (carcinoma) in 1 (5.0%) and burning mouth syndrome (BMS) associated to fibromyalgia in 1 (5.0%).

The two groups of patients (AFP and SFP) did not statistically differ on age (p=0.994). The general characteristics of this sample are outlined in Table 1.

Spontaneous descriptors for pain and timing – Analyzing pain timing, we observed the following results: constant pain in 18 (85.7%) patients with AFP and 16 (72.8%) patients with SFP; paroxysmal and constant pain in 2 (9.5%) AFP patients and 2 (9.1%) SFP patients; episodic and constant in 1 patient from each group (4.8% and 4.5%, respectively in AFP and SFP); floating and constant in 3 (15.0%) from the SFP group. There was no significant statistical difference between AFP and SFP groups (p=0.82). There was no statistic difference between spontaneous descriptors of pain, which are outlined on Table 2.

Triggering pain factors – Emotions were triggering factors in 19 (90.5%) patients with AFP, followed by talking (12-57.1%); in SFP, emotions were also the most important triggering factor (13-65.0%), and followed by cold (12-60.0%). There was statistical difference between the two groups related to the facial contact (p=0.05) and emotions (p=0.06) as triggering factors (Table 3).

Neural-vegetative phenomena – Twelve patients

Table 1. General characteristics of the sample (n=41).

	AFP N=21	SFP N=20	Total N=41
Median age (range)	54.4 yo (35 to 56 y)	54.0 yo (37 to 75 y)	54.5 yo (35 to 76 y)
VAS	7.1 (3 to 10)	8.5 (7 to 10)	7.5 (3 to10)
Median duration of pain (range)	161.4 (3 to 52 months)	82 (6 to 360 months)	(3 to 648 months)
Side the face affected	Left - 9	Left - 10	Left - 19
	Right - 6	Right - 8	Right - 14
	Bilateral – 6	Bilateral – 2	Bilateral – 8

AFP, atypical facial pain; SFP, symptomatic facial pain; VAS, visual analogical scale.

Table 2. Patients distribution related to spontaneous descriptors of pain.

Pain pattern	AFP (n=21)		SFP (n=20)		Total (n=41)	
	N	%	N	%	N	%
Chock-like*	7	9.5	6	12.0	13	10.5
Itching**	9	12.2	7	14.0	16	12.9
Cuting***	5	6.8	4	8.0	9	7.3
Throbbing****	16	21.6	12	24.0	28	22.6
Burning*****	11	14.9	9	18.0	20	16.1
Squeezing	12	16.2	0	0.0	12	9.7
Numbness	7	9.5	2	4.0	9	7.3
Bothering	4	5.4	4	8.0	8	6.5
Heavy	5	6.8	6	12.0	11	8.9
Total	74	100	50	100	124	100

*p=0.76; **p=0.65; ***p=0.83; ****p=0.79; *****p=0.99. Obs: Some patients presented more than one descriptor for the pain.

Table 3. Pain triggering factors. Distribution of AFP and SFP patients.

Pain unchaining factors	AFP		SFP	
	N	%	N	%
Chewing	8	38.1	8	40.0
Teeth brushing	9	42.9	3	15.0
Talking	12	57.1	9	45.0
Swallowing	3	14.3	3	15.0
Head movement	6	28.6	6	30.0
Emotions*	19	90.5	13	65.0
Cold	8	38.1	12	60.0
Heat	4	19.0	3	15.0
Facial contact**	5	23.8	8	40.0

*p=0.06; **p=0.05.

Table 4. Patients distribution concerning neural-vegetative phenomena associated to pain crises.

Neurovegetative phenomena	AFP		SFP	
	N	%	N	%
Tearing	6	28.6	5	25.0
Hyperthermia	2	9.5	2	15.0
Increase in salivation	4	19.0	1	5.0
Nasal obstruction	–	–	1	5.0
Total	12	57.1	9	45.0

Table 5. Traumatic events preceding pain in AFP and SFP groups.

	AFP*		SFP	
	N	%	N	%
Cranial trauma	3	14.2	–	–
Facial trauma	1	6.7	5	25.0
Dental pain	1	6.7	1	5.0
Dental extraction	10	47.6	5	25.0
Total	15	71.4	11	55.0

*p=0.001

(57.1%) with AFP reported neural-vegetative phenomena associated to the pain crises; tearing occurred in 6 (28.6%) and increase in salivation in 4 (19.0%). Nine patients (45.0%) with SFP reported neural-vegetative phenomena; tearing occurred in 5 (25.0%) and hyperthermia in 2 (10.0%) (Table 4). The number of patients with these phenomena was insufficient for statistical analysis.

Preceding facial event or affection –Craniofacial event that preceded the facial pain occurred in 15 (71.4%) patients with AFP, and could be associated to the pain initiation. Dental extraction was reported by 10 (47.6%) and cranial trauma by 3 (14.2%). Eleven (55.0%) patients with SFP reported: dental extraction in 5 (26.0%) and facial trauma in 5 (26.0%). There was a statistical difference among these events (p=0.001). All the results are outlined in Table 5.

Pain and comorbidities – In 13 (61.9%) AFP patients, there was not any kind of previous affection that could potentially be associated to pain; 3 (14.3%) AFP patients reported psychiatric diagnosis by habilitated professionals and/or internalization in a psychiatric hospital in the past; 2 (9.5%) presented *Diabetes mellitus;* 2 (9.5%) presented migraine; 6 (28.6%) presented systemic arterial hypertension, profound venous thrombosis at the superior limb or irritable colon syndrome. In the SFP patients' group, psychiatric abnormalities or internalization at a psychiatric

hospital were reported by 3 (15.0%); 1 (5.0%) presented *Diabetes mellitus;* 3 (15.0%) presented migraine, 3 (15.0%) fibromyalgia; 2 (10.0%) isquemic brain vascular accident and 1 (5.0%) systemic arterial hypertension. The small values did not allow statistical analysis from these data.

Previous treatments – The most frequent drugs previously used as an analgesic treatment by 15 (71.4%) AFP patients were: antidepressants (31.1%), common analgesics and/or non-hormonal anti-inflammatory drugs (26.7%) and/or anticonvulsants (26.7%). From the SFP patients' group, 15 (75.0%) used drugs as analgesics: common analgesics and/or non-hormonal anti-inflammatory drugs (35.5%), antidepressants (29.0%) and/or anticonvulsants (16.1%). There was a significant statistical difference between both groups related to anticonvulsants (chi-square test) (p=0.01). No patient underwent psychotherapy, physical medicine or functional neurosurgical treatment.

DISCUSSION

This study corroborates that the diagnostic criteria for AFP are not exclusive for this disease, and can be used on other painful facial conditions very well known (but not always identified by the physician or dentist from primary care), as the common myofascial masticatory pain or the rare Wallenberg syndrome. Both conditions belong to different professional areas and that's the possible reason why they are not easily recognized during the first evaluation[19]. The incorrect diagnosis occurred in half of this sample and indicates the necessity of multidisciplinary trained groups for the evaluation and treatment of persistent facial pain patients. Sometimes, the clinical expressions of benign diseases, as dental pain, are similar to malign diseases, as tumors[12].

Tumors are often considered as persistent chronic pain and their presentation exclusively as pain turns them similar to other conditions such as TMD or AFP[20]. Two initial AFP cases of this sample were actually tumor pain (1 intracranial and other from the tongue), and that is the reason for the careful examination, including imaging and laboratorial exams of all patients with AFP initial diagnosis[15,22-24]. Beyond that, pain due to tumor occurs at advantages states and can change the prognostic of the patients. Periodic evaluation in cases of persistent facial pain must be performed.

Another relevant data refer to variable trauma reported by these patients as their initial pain cause, including dental procedures[25]. Other triggering factors were similar for both groups except for emotions at AFP patients (p=0.06), which was different from the SFP group. It is important if we consider that physical and psychiatric abnormalities are very common in chronic patients with obscure symptoms[26]. The evaluation of these data associated to longer duration supports the idea that chronicity, iatrogeny and emotional abnormalities are common findings in patients with AFP[8,21], and induces to speculate that AFP patients are chronic, with long duration with multiple iatrogenies. The AFP group used more anticonvulsant that another group (p=0.01) On the other hand, there was a predominance of skin touch as a triggering factor at the SFP group characterizing allodynea, typical form neuropathic pain (4 patients in this study) even in TMD and fibromyalgia patients.

Temporomandibular disorder is a general term for musculoskeletal pain of the masticatory system, with multiple etiology[18]. Its diagnosis is based on history and clinical exam and the inclusion criteria include the presence of limited mouth-opening, tenderness of the masticatory muscles and abnormalities during mandibular function[18]. TMD pain may be uni, billateral or migratory due to some characteristics of the masticatory system and temporomandibular joint (TMJ), and can simulates AFP[3]. In this sample around 50% of the patients from the SFP presented TMD, and 3 of them had also fibromyalgia, what complicated even more the diagnosis. The diagnostic criteria for TMD are essentially clinical and there are many painful conditions that are similar to them, which must be excluded. And, of course, any chronic pain patient may present behaviour and central neural abnormalities that are similar and are not diagnostic criteria. Neural-vegetative phenomena were observed in both groups and are common in AFP patients as it was previously demonstrated[27], but can also be present at the SFP group.

BMS is a painful intra-oral condition, with no observable mucosal lesions. The patients often become chronic with a continuous intra-oral burning sensation as the primary characteristic of pain[2]. It has multifactor, is prevalent at women after menopause, and it is considered idiopathic, although many chronic diseases may cause burning mouth, as neuropathies, TMD, fibromyalgia and tumor[22]. Anyway it is a special entity, not only the idiopathic but also the symptomatic pain[28].

Although the attempts to redefine the AFP criteria[11], and the fact that IASP does not recognize this painful condition[17], there is still the controversies

about it, and suggestions to redefine and reclassify a re often[27], because diagnostic criteria are unspecific. This study supports previous data and suggest the necessity of a systematic protocol for the evaluation of chronic facial pain patients[12,21], particularly when they do not respond to usual treatments. Interdisciplinary groups are indispensable at pain centers. The same spontaneous descriptors for both groups suggests the unspecific of common symptoms as b u rning, shock-like pain or throbbing pain, supporting the similarity of AFP and other painful syndromes and leading to the adequate training for the careful evaluation.

AFP patients are considered complex and the clinical results are not satisfactory, independent to pain duration. One possible reason for treatment failure was the partial or incomplete diagnosis as more than 50% of this sample. The patients are not completely evaluated, but only examined by the present specialist, what implies in the application of only his specific field of treatment. This could explain the partial results of treatments of specialists from different fields[19], supporting the interest in a multidisciplinary systematic evaluation for patients with suspicion of AFP.

Data of this study added to scientific information suggest that AFP complexity occurs due to incorrect diagnosis. In our opinion, reasons for the difficulties during differential diagnosis with AFP are: a) complexity of face and trigeminal system; b) variety of causes for facial pain; c) clinical expression similar to other facial pain syndromes; d) face is part of the body involving many specialists, including physicians, dentists, favoring terms "atypical" and/or "idiopathic" for unspecific symptoms. Thus, continued education and interdisciplinary groups are necessary for the reclassification of AFP with professionals from all facial specialties.

In conclusion, our data support the existent literature about the similarity of tumors and chronic myofascial pain, as TMD, with AFP. There f o re, attention should be given to the higher frequency of traumatic events is AFP patients before pain onset, the longer pain duration and emotions as an important triggering factor to pain. The accurate diagnosis is the first step to understand AFP, and to explain why it is still an undefined syndrome with unspecific diagnostic criteria. Finally, after the correct distinction f rom other orofacial sources of pain, we will need to discuss what is, exactly, *atypical, or idiopathic, facial pain.*

REFERENCES

1. Lipton RB. Diagnosis and epidemiology of pediatric migraine. Curr Opin Neurol 1997;10:231-236.
2. Kesse W, Violaris N, Howlett DC. An unusual cause of facial pain: malignant change in a calcified pleomorphic adenoma in the deep lobe of the parotid gland. Ear Nose Throat J 2003;82:623-625
3. Siqueira JTT, Teixeira MJ. Dor orofacial: diagnóstico, tratamento e qualidade de vida. Curitiba: Edt. Maio, 2001.
4. Franco ACO, Siqueira JTT, Mansur AJ. Bilateral facial pain from cardiac origin: a case report. Br Dent J 2005;198:680-779.
5. Zakrzewska JM. Classification issues related to neuropathic trigeminal pain. J Orofac Pain 2004;18.4:325-331.
6. Solomon S, Lipton RB. Criteria for the diagnosis of migraine in clinical practice. Headache 1991;31:384-387.
7. Graff-Radford SB, Reeves JL, Jaeger M. Management of chronic head and neck pain: effectiveness of altering factors perpetuating myofascial pain. Headache 1987;27:186-190.
8. Teixeira MJ. A lesão por radiofrequência e a descompressão neuro-vascular para o tratamento da neuralgia do trigêmeo. Tese. São Paulo, 1984.
9. Woda A, Pionchon P. An unified concept of idiopathic orofacial pain: clinical features. J Orofac Pain 1999;13:172-184.
10. Speculand B. Intractable facial pain and illnesss behavior. Pain 1981; 11:213-219.
11. Headache Classification Commitee of the Internatinal Headache Society. Classification and diagnostic criteria for headache disorders, cranial neuralgias and facial pain. Cephalalgia 2004;24(Suppl 1):S1-S150.
12. Siqueira JTT, Ching LH, Nasri C, et al. Clinical study of patients with persistent orofacial pain. Arq Neuropsiquiatr 2004;62:988-996.
13. Bussone G, Tulio V. Reflections on the nosology of cranio-facial pain syndromes. Neurol Sci 2005;26(Suppl 2):S61-S64.
14. Agostoni E, Frigerio R, Santoro P. Atypical facial pain: clinical considerations and differential diagnosis. Neurol Sci 2005;26(Suppl 2):S65-S67.
15. Quail G. Atypical facial pain: a diagnostic challenge. Aust Fam Physician 2005;34:716-718.
16. Bodere C, Pionchon P. Orofacial pain and secondary headaches. Rev Neurol (Paris) 2005;161:716-719.
17. Merskey H, Bogduk N. Classification of chronic pain. 2.Ed. Seattle: IASP Press, 1994.
18. Okeson JP. Orofacial pain: guidelines for assessment, diagnosis and management. Chicago: Quintessence, 1996.
19. Elrasheed AA, Worthington HV, Ariyaratnam S, Duxbury AJ. Opinions of UK specialists about terminology, diagnosis, and treatment of atypical facial pain: a survey. J Oral Maxillofac Surg 2004;42:566-571.
20. C u ffari L, Siqueira JTT, Nemr K, Rapaport A. Pain complaint as the first symptom of oral cancer: a descriptive study. Oral Surg Oral Med Oral Pathol Oral Radiol Endod 2006;102:56-61.
21. Woda A, Tubert-Jeannin S, Bouhassira D, et al. Towards a new taxonomy of idiopathic orofacial pain. Pain 2005;116:396-406.
22. Nasri C, Siqueira JTT. Síndrome da ardência bucal (SAB). In Siqueira JTT, Teixeira MJ (Eds). Dor orofacial diagnóstico, terapêutica e qualidade de vida. Curitiba: Maio, 2001.
23. Wolfe F, Simons DG, Fricton J, et al. The fibromyalgia and myofacial pain syndromes: a preliminary study of tender points and trigger points in persons with fibromyalgia, myofascial pain syndrome and no disease. J Rheumatol 1992;19:994-951.
24. Siqueira SRDT, Teixeira MJ. Neuralgias do segmento facial. JBA 2003;3:101-110.
25. Siqueira SRDT, Nóbrega JCM, Valle LBS, Teixeira MJ, Siqueira JTT. Idiopathic trigeminal neuralgia: clinical aspects and dental procedures. Oral Surg Oral Med Oral Pathol Oral Radiol and Endod 2004;98: 311-315.
26. Kouyanou K, Pither CE, Rabe-Hesketh S, Wessely S. A comparative study of iatrogenesis, medication abuse, and psychiatric morbidity in chronic pain patients with and without medically explained symptoms. Pain 1998;76:417-426.
27. Pfaffenrath V, Rath M, Pollmann W, Keeser W. Atypical facial pain: application or IHS criteria. Cephalalgia 1993;13(Suppl 12):S84-S88.
28. Scala A, Checchi L, Montevecchi M, Marini I, Giamberardino MA. Update on burning mouth syndrome: overview and patient management. Crit Rev Oral Biol Med 2003;14:275-291.