

Statement of the 1st Consensus on Temporomandibular Disorders and Orofacial Pain

Simone Vieira Carrara**, Paulo César Rodrigues Conti***, Juliana Stuginski Barbosa****

Abstract

This Statement of the 1st Consensus on Temporomandibular Disorders and Orofacial Pain^{*} was created with the purpose of substituting controversies for scientific evidence within this specialty field of dentistry. The document provides clear and well-grounded guidance to dentists and other health professionals about the care required by patients both in the process of differential diagnosis and during the stage when they undergo treatment to control pain and dysfunction. The Statement was approved in January 2010 at a meeting held during the International Dental Congress of São Paulo and draws together the views of Brazil's most respected professionals in the specialty of Temporomandibular Disorders and Orofacial Pain.

Keywords: Bruxism. TMJ. Temporomandibular joint disorders. Headache. Dentistry. Cervicalgia (neck pain).

INTRODUCTION

By definition, orofacial pain is any pain associated with soft and mineralized tissues (skin, blood vessels, bones, teeth, glands or muscles) of the oral cavity and face. This pain can usually be referred to the head and/or neck region or even be associated with cervicalgia (neck pain), primary headaches and rheumatic diseases such as fibromyalgia and rheumatoid arthritis.¹

The main sources of orofacial pain are odon-

togenic problems, headaches, neurogenic diseases, musculoskeletal pain, psychogenic pain, cancer, infections, autoimmune phenomena and tissue trauma.¹

Historically, dentistry has been geared primarily to the diagnosis and treatment of odontogenic—pulp and periodontal—pain. We should not, however, neglect to identify other sources of orofacial pain, such as typical inflammatory processes (sinusitis, parotitis),

^{*} Note from the rapporteurs: Although the Federal Council of Dentistry designates the specialty, in Portuguese, with the term "Têmporo-mandibular", its correct spelling is still under debate. A query on the website of the Brazilian Academy of Letters (www.academia.org.br) yielded the alternative "Temporo-mandibular" and no mention of the hyphenated spelling. For this reason, this is the term used throughout the Portuguese version of this document, as we anticipate that, in future, it will go into force as the official designation.

^{**} Specialist in TMD and Orofacial Pain.

^{***} Associate Professor, Department of Prosthodontics, School of Dentistry, Bauru, USP. Head of Postgraduate Programs in Applied Dental Sciences, FOB, USP. Diplomate, American Board of Orofacial Pain.

^{****} Specialist in TMD and Orofacial Pain. MSc in Neurosciences, School of Medicine, Ribeirão Preto, USP.

continuous or intermittent neuropathic pain (neuralgia, deafferentation pain, sympathetically maintained pain), headache and temporomandibular disorder.

Referring orofacial pain patients, as speedily as possible, to the appropriate therapist is an integral part of the quality of care provided by health professionals. Any professional willing to treat these patients must possess an in-depth knowledge of the differential diagnosis of orofacial pain and its subtypes, and apply evidencebased techniques to control the symptoms.

Orofacial pain is highly prevalent in the population. It causes patients great suffering and can, moreover, stem from life-threatening diseases. Hence the crucial importance of dentists in conducting an appropriate diagnostic process.

It has been estimated that approximately 22% of the population presented with at least one type of orofacial pain in the 6 months prior to data collection.² The most frequent cause of orofacial pain pointed out in that study had an odontogenic origin (12.2%), followed by temporomandibular disorders (TMD), found in 5.3% of the population.

From now on, this Statement will be focusing on the discussion of temporomandibular disorder.

DEFINITION OF TEMPOROMANDIBULAR DISORDER (TMD)

According to the American Academy of Orofacial Pain, TMD is defined as a group of disorders involving the masticatory muscles, the temporomandibular joint (TMJ) and associated structures.¹

The symptoms most often reported by patients include pain in the face, TMJ, masticatory muscles and pain in the head and ear. Other symptoms reported by patients are ear manifestations such as tinnitus, ear fullness and vertigo.¹ The signs are primarily muscle and TMJ tenderness to palpation, limitation and/or incoordination of mandibular movements and joint noises.¹

EPIDEMIOLOGY

Epidemiological studies estimate that 40% to 75% of the population have at least one TMD sign, such as TMJ noises, and 33%, at least one symptom such as pain in the face or TMJ.¹

Few studies in Brazil have assessed the prevalence of TMD signs and symptoms in population samples. A recent study found that 37.5% of the population had at least one TMD symptom.³ An estimated 41.3% to 68.6% of college students showed at least one TMD sign or symptom.⁴⁻⁷

There is a difference between the prevalence of TMD signs and symptoms in the population and the actual need to treat these individuals. In a systematic review and meta-analysis published recently, the prevalence of treatment need for TMD in the adult population was estimated at 15.6%, while the estimates for the younger population, 19 to 45 years, was higher than for older adults (above 46 years old).⁸

Factors such as a dearth of studies, the diversity of features found in the samples and the methodology used to determine TMD signs and symptoms preclude the extrapolation of results to the entire Brazilian population. It is important that a national study with appropriate methodology be conducted to gain knowledge of the actual situation. It would be of vital importance to include TMD and other non-dental diseases whose symptoms are characterized by orofacial pain in the "Survey of oral health conditions among the Brazilian population", conducted by the Ministry of Health.

DIAGNOSIS

No reliable method currently exists that can be unconditionally used by researchers and clinicians to diagnose and measure the presence and severity of temporomandibular disorders. For diagnosis of individual cases, patient history (anamnesis) remains the most important step in formulating the initial diagnostic impression.

Physical examination, comprising muscle and TMJ palpation, measurement of active mandibular movements and joint noise analysis—when performed by calibrated, welltrained professionals—is an invaluable instrument in the diagnosis and therapy planning, as well as in monitoring the efficacy of proposed treatments.¹

Ancillary diagnostic methods such as polysomnography (PSG) and TMJ images are considered auxiliary means that prove useful only in some individual cases and in research work.^{9,10,11} No direct association has been made, however, between the results of such tests and the presence of TMD signs and symptoms.

In clinical practice, the initial evaluation questionnaire should include some questions concerning TMD signs and symptoms. Any positive response to these questions may signal the need for thorough evaluation by a professional specialized in TMD and Orofacial Pain (Table 1).

DIAGNOSTIC CLASSIFICATION OF TMD'S

The American Academy of Orofacial Pain (AAOP) recently established, in the 4th edition of its manual, new guidelines for the diagnosis and classification of different forms of TMD, which are divided into two major groups (Muscular TMD and Articular TMD) with their respective subdivisions (Tables 2 and 3).¹

The International Classification of Headache Disorders (ICH) of the International Headache Society (IHS) includes a specific type of headache secondary to TMD in its 11th class (IHS 11.7 – Headache or facial pain attributed to TMJ disorder).¹²

1 - Do you have trouble, pain or both when opening the mouth, to yawn for example?
2 - Does your jaw get "locked", "stuck" or does it "drop"?
3 - Do you have difficulty, pain or both, when chewing, talking or using the jaws?
4 - Have you noticed any noises in the jaw joints?
5 - Do you usually feel your jaw tired, stiff or tense?
6 - Do you have any pain in the ears, temples or cheeks?
7 - Do you often have headaches, neck pain or toothache?
8 - Did you recently suffer any trauma to the head, neck or jaw?
9 - Have you noticed any recent change in your bite?
10 - Have you received any previous treatment for unexplained facial pain or a jaw joint problem?

TABLE 1 - Examples of questions to screen patients for possible signs and symptoms of temporomandibular disorder. Source: Leeuw¹, 2010.

11.7.1.1 - Disc derangement disorders
11.7.1.1.1 - Disc displacement with reduction
11.7.1.1.2 - Disc displacement without reduction
11.7.1.2 - TMJ displacements
11.7.1.3 - Inflammatory disorders
11.7.1.3.1 - Synovitis and capsulitis
11.7.1.3.2 - Polyarthritis
11.7.1.4 - Non-inflammatory disorders
11.7.1.4.1 - Primary osteoarthritis
11.7.1.4.2 - Secondary osteoarthritis
11.7.1.5 - Ankylosis
11.7.1.6 - Fracture (condylar process)

TABLE 2 - Recommended changes in the IHS 11.7.1 diagnostic classification: Headache or facial pain attributed to TMJ dysfunction. Source: Leeuw¹, 2010.

11.7.2.1 - Local myalgia
11.7.2.2 - Myofascial pain
11.7.2.3 - Centrally mediated myalgia
11.7.2.4 - Miospasms
11.7.2.5 - Myositis
11.7.2.6 - Myofibrotic contracture
11.7.2.7 - Neoplasia

TABLE 3 - Recommended changes in the IHS 11.7.2 diagnostic classification: Headache or facial pain attributed to masticatory muscle dysfunction. Source: Leeuw¹, 2010. However, this seems incomplete because it does not address the two major TMD groups and their subtypes, as described in the AAOP classification. In this regard, it is noteworthy that the AAOP has issued a proposal to the IHS to modify that ICH item (Tables 2 and 3), so far unsuccessfully.

ETIOLOGY

The attempt to identify a clear and universal TMD cause has not as yet proved successful. Recent studies have concluded that TMD's have a multifactorial origin.

To be complete, a medical history should identify predisposing factors (which increase the risk of TMD), trigger factors (which cause the installation of TMD) and perpetuating factors (which interfere with TMD control). Among these factors we will mention those that are, in principle, more relevant.¹

Trauma

• Direct trauma or macrotrauma.

• Indirect trauma: Represented by whiplash injuries.

• Microtrauma: Caused by minor trauma performed repetitively, such as parafunctional habits (bruxism, teeth clenching, etc.).

Psychosocial factors

• Anxiety, depression, etc.

Physiopathological factors

• Systemic factors: degenerative, endocrine, infectious, metabolic, neoplastic, neurological, vascular and rheumatological diseases.

• Local factors: change in synovial fluid viscosity, increased intra-articular pressure, oxidative stress, etc.

• Genetic factors: presence of haplotypes associated with soreness.

Researchers and clinicians specializing in orofacial pain have reached consensus that

dental occlusion can no longer be considered a primary factor in the etiology of TMD.¹³⁻¹⁷ Some occlusal relationship factors are cited as predisposing to TMD. These studies, however, show that the correction of these factors in symptomatic individuals has shown little effectiveness in controlling TMD.^{18,19,20}

This scientific fact, however, does not diminish the importance of occlusion in the practice of dentistry. Occlusal pathologies produce significant aesthetic and functional effects on the masticatory apparatus. Dental surgeons must pay special attention to occlusion when performing physical examination or any clinical procedure.

TREATMENT

Scientific advances in this area require professionals to be continually upgrading their knowledge. Inappropriate therapies can cause iatrogenic complications, allow chronicity of pain and induce patients to mistakenly believe that their disease should be treated by a professional from another specialty.

The goal of TMD treatment is to control pain, restore masticatory apparatus function, re-educate patients and minimize adverse loads that perpetuate the problem.

The fact that the etiology of TMD is unknown and its character self-limiting recommends the initial use of noninvasive and reversible therapies, whose efficiency has proved extremely high in TMD patients.

Some studies report the control of signs and symptoms in more than 90% of patients receiving conservative treatment. Patient education, self-management, behavioral intervention, use of drugs, interocclusal splints, physical therapy, postural training and exercises make up the list of options applicable to almost all TMD cases.²¹⁻²⁵

The practice of Evidence-Based Dentistry (EBD) does not support the prescription of

techniques that promote complex and irreversible changes such as occlusal adjustment by selective grinding, orthodontic therapy, functional orthopedics, orthognathic surgery or prosthetic oral rehabilitation techniques, in the treatment of temporomandibular disorder.¹⁹

TMJ surgery can prove necessary in a few specific cases, such as ankylosis, fractures and certain congenital or developmental disorders. In exceptional cases, it can be applied to complement the treatment of internal TMJ disorders.^{1,26}

RESPONSIBILITIES TOWARDS TMD PATIENTS

Some factors can clearly explain the reasons why more attention should be given to temporomandibular disorders: high prevalence in the population, significant social cost and, especially, substantial personal cost.

Currently, TMD and orofacial pain are not mandatory topics of discussion in the curriculum of educational institutions. Such disregard leads to the inadequate training of dental surgeons in recognizing and guiding TMD patients. An incomplete semiology denies patients the opportunity to have an appropriate treatment with improvement in their quality of life.

Few public policies are currently aimed at raising awareness of TMD and treating TMD patients. In this respect, the health care service provided by the state is negligible. This lack of assistance and information invariably frustrates patients, leading them to a wild goose chase for other specialties that treat similar symptoms, but do not promote proper control of TMD. The specialty called Temporomandibular Disorders and Orofacial Pain, regulated by the Federal Council of Dentistry, has been all but forgotten within the scope of oral health.

It is also important to underscore that the procedures geared to the treatment of TMD are not included in the fee schedules published by unions, dentistry associations and health plans. This omission can undermine the relationship between professionals and patients as well as hinder the dissemination of appropriate treatment techniques to professionals in other specialties.

Regarding service provider liability in the field of orofacial pain, agreements enforce obligations to provide therapeutic means but not necessarily results. The reason being that even when a professional makes use of all resources available in the scientific literature, these may not produce the desired results. The existence of refractory patients is quite common in the management of chronic diseases.

Service provision proposals, however, must inform patients that the resources are aimed at reducing levels of pain, improving quality of life and restoring function.

FINAL CONSIDERATIONS

The TMD and Orofacial Pain specialty was created in 2002 by the Brazilian Federal Council of Dentistry. Nonetheless, even among health professionals this specialty is still quite unknown. The need to include the TMD and Orofacial Pain discipline in the curriculum of undergraduate Dentistry courses is not only vital but urgent. The acknowledgement and support of the authorities that manage public health policies are necessary if primary care to patients with orofacial pain is to be effectively implemented. These measures will reduce the suffering and financial burden of these individuals.

Protocols or continuing education courses that support the use of occlusal therapy as a form of definitive treatment to control the signs and symptoms of TMD should be regarded as unscientific practice.

Research on orofacial pain has contributed to improve treatments, but it is essential that new studies elucidate important issues and that the other dental specialties absorb and support these new achievements.

REFERENCES

- Leeuw R. Dor orofacial: guia de avaliação, diagnóstico e tratamento. 4ª ed. São Paulo: Quintessence; 2010.
- Lipton JA, Ship JA, Larach-Robinson D. Estimated prevalence and distribution of reported orofacial pain in the United States. J Am Dent Assoc. 1993;124:115-21.
- Gonçalves DA, Speciali JG, Jales LC, Camparis CM, Bigal ME. Temporomandibular symptoms, migraine and chronic daily headaches in the population. Neurology. 2009 Aug; 25;73(8):645-6.
- Bonjardim LR, Lopes-Filho RJ, Amado G, Albuquerque RL Jr, Gonçalves SR. Association between symptoms of temporomandibular disorders and gender, morphological occlusion and psychological factors in a group of university students. Indian J Dent Res. 2009 Apr-Jun;20(2):190-4.
- Conti PC, Ferreira PM, Pegoraro LF, Conti JV, Salvador MC. A cross-sectional study of prevalence and etiology of signs and symptoms of temporomandibular disorders in high school and university students. J Orofac Pain. 1996 Summer;10(3):254-62.
- Oliveira AS, Bevilaqua-Grossi D, Dias EM. Sinais e sintomas de disfunção temporomandibular nas diferentes regiões brasileiras. Fisioter Pesq. 2008 out-dez;15(4):392-7.
 Pedroni CR, Oliveira AS, Guaratini MI. Prevalence study of
- Pedroni CR, Oliveira AS, Guaratini MI. Prevalence study of signs and symptoms of temporomandibular disorders in university students. J Oral Rehabil. 2003 Mar;30(3):283-9.
- Al-Jundi MA, John MT, Setz JM, Szentpétery A, Kuss O. Meta-analysis of treatment need for temporomandibular disorders in adult nonpatients. J Orofac Pain. 2008 Spring;22(2):97-107.
- Ahmad M, Hollender L, Anderson Q, Kartha K, Ohrbach R, Truelove EL, et al. Research diagnostic criteria for temporomandibular disorders (RDC/TMD): development of image analysis criteria and examiner reliability for image analysis. Oral Surg Oral Med Oral Pathol Oral Radiol Endod. 2009 Jun;107(6):844-60.
- Hugger A, Hugger S, Schindler HJ. Surface electromyography of the masticatory muscles for application in dental practice. Current evidence and future developments. Int J Comput Dent. 2008;11(2):81-106.
- Rossetti LM, Araujo CRP, Rossetti PH, Conti PC. Association between rhythmic masticatory muscle activity during sleep and masticatory myofascial pain: a polysomnographic study. J Orofac Pain. 2008 Summer;22(3):190-200.
- Subcomitê de Classificação das Cefaléias da Sociedade Internacional de Cefaléia. Classificação internacional das cefaléias. 2ª ed. São Paulo: Segmento Farma; 2004.
- Magnusson T, Carlsson GE, Egermak I. Changes in clinical signs of craniomandibular disorders from the age of 15-25 years. J Orofac Pain. 1994;8:207-15.
- Seligman DA, Pullinger A. Analysis of occlusal variables, dental attrition, and age for distinguishing healthy controls from female patients with intracapsular temporomandibular disorders. J Prothet Dent. 2000;83:76-82.

- Egermark I, Magnusson T, Carlsson GE. A 20-year follow-up of signs and symptoms of temporomandibular disorders and malocclusions in subjects with and without orthodontic treatment in childhood. Angle Orthod. 2003;73(2):109-15.
- McNamara JA Jr, Türp JC. Orthodontic treatment and temporomandibular disorders: is there a relationship? Part 1: Clinical studies. J Orofac Orthop. 1997;58(2):74-89.
- Mohlin BO, Derweduwen K, Pilley R, Kingdon A, Shaw WC, Kenealy P. Malocclusion and temporomandibular disorder: a comparison of adolescents with moderate to severe dysfunction with those without signs and symptoms of temporomandibular disorder an their further development to 30 years of age. Angle Orthod. 2004;74:319-27.
- Egermark I, Carlsson GE, Magnusson T. A prospective long-term study of signs and symptoms of temporomandibular disorders in patients who received orthodontic treatment in childhood. Angle Orthod. 2005; 75(4):645-50.
- Koh H, Robinson PG. Occlusal adjustment for treating and preventing temporomandibular joint disorders. J Oral Rehabil. 2004;31(4):287-92.
- Wadhwa L, Utreja A, Tewari A. A study of clinical signs and symptoms of temporomandibular dysfunction in subjects normal occlusion, untreated, and treated malocclusions. Am J Orthod Dentofacial Orthop. 1993;103:54-61.
- De Laat A, Stappaerts K, Papy S. Counseling and physical therapy as treatment for myofascial pain of the masticatory system. J Orofac Pain. 2003;17(1):42-9.
- 22. Michelotti A, Steenks MH, Farella M, Parisini F, Cimino R, Martina R. The additional value of a home physical therapy regimen versus patient education only for the treatment of myofascial pain of the jaw muscles: short-term results of a randomized clinical trial. J Orofac Pain. 2004;18(2):114-25
- Nicolakis P, Erdogmus B, Kopf A, Nicolakis M, Piehslinger E, Fialka-Moser V. Effectiveness of exercise therapy in patients with myofascial pain dysfunction syndrome. J Oral Rehabil. 2002;29(4):362-8.
- Schiffman EL, Look JO, Hodges JS, Swift JQ, Decker KL, Hathaway KM, et al. Randomized effectiveness study of four therapeutic strategies for TMJ closed lock. J Dent Res. 2007 Jan;86(1):58-63.
- 25. Yuasa H, Kurita K. Treatment group on temporomandibular disorders randomized clinical trial of primary treatment for temporomandibular joint disk displacement without reduction and without osseous changes: a combination of NSAIDs and mouth-opening exercise versus no treatment. Oral Surg Oral Med Oral Pathol Oral Radiol Endod. 2001 Jun;91(6):671-5.
- American Association of Oral and Maxillofacial Surgeons. Parameters of care for oral and maxillofacial surgery. A guide for practice, monitoring and evaluation. J Oral Maxillofac Surg. 1992 Jul;50(7 Suppl 2):i-xvi,1-174.

ENDORSERS

- Ana Cristina Lotaif MSc in TMD and Orofacial Pain, University of California (UCLA). Diplomate of the American Board of Orofacial Pain. Former Assistant Professor, Clinic of Orofacial Pain and Oral Medicine, University of Southern California.
- Carlos dos Reis Pereira de Araújo PhD and MSc in Dental / Oral Rehabilitation (USP-Bauru). Specialist in Implants (Universitat Frankfurt, Germany). Specialist in Orofacial Pain (Rutgers, The State University of New Jersey / USA). Specialist in Dentistry / Prosthodontics (University of Washington, USA). Specialist in Temporomandibular Disorders (University of Rochester, USA). Professor of graduate and postgraduate studies, USP-Bauru.
- Cinara Maria Camparis MSc and PhD in Restorative Dentistry, São Paulo State University. Postdoctoral Fellow in Orofacial Pain, Clinics Hospital-USP and Sleep Institute-UNIFESP. Associate Professor, Julio de Mesquita Filho São Paulo State University. Head of the Group of Assistance, Research and Study on Orofacial Pain and Headache (GAPEDOC), School of Dentistry of Araraguara, UNESP.
- Daniela Aparecida de Godói Gonçalves Specialist in TMD and Orofacial Pain. MSc in Neuroscience, USP, Ribeirão Preto. PhD in Oral Rehabilitation, School of Dentistry of Araraquara.
- Denise Cahnfeld Specialist in TMD and Orofacial Pain
- Eleutério Araújo Martins Head of the Specialization Course in TMD and Orofacial Pain ABO / RS.
- Francisco José Pereira Junior MSc and PhD in TMD and Orofacial Pain, University of Lund / Sweden.
- Guiovaldo Paiva Former President and founding member of the Brazilian Society of TMJ and Orofacial Pain (SOBRADE). Specialist in Dental Prosthesis and Periodontology. Postgraduate studies in occlusion, Center for Teaching and Research in Oral Rehabilitation (CIER, Mexico, DF).
- João Henrique Krahenbuhl Padula Specialist in Restorative Dentistry, UMESP. Specialization Course in Morphology, Disorders of the TMJ and Masticatory Muscles, UNIFESP. Specialist in Temporomandibular Disorders and Orofacial Pain, CFO.
- Jorge Von Zuben MSc in TMD and Orofacial Pain, UNIFESP. Specialist in TMD and Orofacial Pain, CFO. Specialist in Dental Prosthesis, CFO. Head of the Improvement and Specialization courses in TMD and Orofacial Pain, ACDC Campinas / SP.
- José Luiz Peixoto Filho Specialist in Orthodontics, UERJ. Specialist in TMD and Orofacial Pain, Brazilian Army Dental Clinic / RJ.
- José Tadeu Tesseroli de Siqueira PhD in Pharmacology, Institute of Biomedical Sciences, USP and post-doc, Department of Psychobiology (Sleep Medicine), UNIFESP. Supervisor, Improvement Courses in Hospital Dentistry, area of Orofacial Pain, PAP / FUNDAP Clinics Hospital, FMUSP. Researcher and Advisor, Department of Neurology and Program of Experimental Pathophysiology, FMUSP. Member of the International Association for the Study of Pain (IASP). Board Member of the Brazilian Society for the Study of Pain. Visiting Professor and accredited supervisor of the Campinas State University. Member of the editorial board of the Journal of Oral Rehabilitation, the Journal of the EAP / APCD and the Pain Journal (São Paulo).
- Juliana S. Barbosa Specialist in TMD and Orofacial Pain and MSc in Neuroscience, School of Medicine of Ribeirão Preto / SP. Member of the Brazilian Headache Society (SBCe) and the Brazilian Society for the Study of Pain (SBED).
- Lílian C. Gionnasi Marson PhD in Biomedical Engineering / Sleep Disorders. MSc in Biomedical Engineering / Treatment of sleep apnea with intra-oral appliances. Member of the Brazilian Sleep Association (ABS). Specialist in Restorative Dentistry, UNI-CAMP. Specialist in Orthodontics and Functional Orthopedics (São José dos Campos / SP).
- Marta Rampan Solange Specialist in Prosthodontics and Specialist in Orofacial Pain and Temporomandibular Disorders.
- Paulo César Conti PhD in Dentistry (Oral Rehabilitation), University of São Paulo and Post-doctoral Fellow, University of Medicine and Dentistry of New Jersey, USA. Professor, University of São Paulo; Head of Postgraduate Studies in Oral Rehabilitation and Vice Chairman of the Postgraduate Commission, University of São Paulo. Diplomate of the American Board of Orofacial Pain.

- Renata Campi de Andrade Pizzo Specialist in TMD and Orofacial Pain and PhD, Department of Neurosciences, Clinics Hospital, University of São Paulo. President of the Orofacial Pain Commission, Brazilian Headache Society (SBCe).
- Renata Silva Melo Fernandes Assistant Professor, School of Dentistry, Federal University of Pernambuco. Head of the course on TMD and Orofacial Pain, Campinas Association of Dental Surgeons.
- Reynaldo Leite Martins Jr Dental Course Professor, Várzea Grande University Center / MT (UNIVAG). Member of the clinical staff, Department of Dentistry, Mato Grosso Cancer Hospital.
- Ricardo de Souza Tesch Specialist in Orthodontics, Campinas Association of Dental Surgeons. MSc in Health Sciences, Heliopolis Hospital of São Paulo. Professor, Course of Specialization in Orthodontics, ABO - Sections of Petrópolis and Duque de Caxias, RJ. Head of the Specialization Course in TMD and Orofacial Pain, Brazilian Dental Association - Section of Petrópolis.
- Rodrigo Wendel dos Santos Specialist and MSc, UNIFESP. Participated in an examining board at the CRO to certify TMD and OFP specialists.
- Sandra Helena dos Santos PhD in Radiology UNESP SJC, Division of Dentistry, General Command for Aerospace Technology - CTA.
- Sérgio Nakazone Jr MSc and PhD in Dental Prosthesis, USP-SP. Specialist in Temporomandibular Disorders and Orofacial Pain, CFO. Specialist in Functional Orthopedics, CFO. Former President of the Brazilian Academy of Cranio-oro-cervical Pathophysiology (ABDCOC). Member of the Occlusion and TMJ Service, FOUSP (SOA-USP). Head of the Specialization Course in Oral Rehabilitation, CIODONTO.
- Simone Vieira Carrara Specialist in Temporomandibular Disorders and Orofacial Pain. Member of the Brazilian Headache Society (SBCe). Member of the Brazilian Society for the Study of Pain (SBED).
- Wagner de Oliveira MSc and PhD, FOSJC UNESP. Specialist in Prosthetics and TMD, and Orofacial Pain. Head of the Center for Occlusion and TMJ, (COAT), FOSJC. Author of the book: TEM-POROMANDIBULAR DISORDERS. EAP Series / APCD São Paulo. Faculty of the Specialization Course in Acupuncture, IOT / FMUSP.

Submitted: February 2010 Revised and accepted: March 2010

Contact Address

Simone Vieira Carrara SHLS 716, Bl. E, n° 503 – Asa Sul CEP: 70.390-700 – Brasília/DF, Brazil E-mail: simonecarrara@terra.com.br