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Opinion

The Etiology of Temporomandibular Disorder and Orofacial Pain

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For a long time, science has tried to relate occlusal factors with temporomandibular disorders, but the multifactorial etiology of this disorder still confuses researchers a lot. The definitions of temporomandibular disorder (TMD) are numerous, one of the most current was established in 2003.

In 2003, a symposium, according to the American Academy of Orofacial Pain (AAOP), TMD is summarized in a set of clinical problems, involving the masticatory muscles, the temporomandibular joints and associated structures. Generally, the signs and symptoms that characterize the disorders are: spontaneous pain, pain and tenderness to the touch of the muscles of mastication and temporomandibular joint, joint noises during mandibular movement and limited or asymmetrical mandibular movements.

These disorders can be strategically divided into four types, defined as: Muscular, joint, neuropathic and psychosocial. The term TMD was basically defined in a collective designation that involves a series of clinical problems that affect the masticatory muscles, the temporomandibular joint and associated structures, or both. These disorders are considered pathological and form the main orofacial pain of non-dental origin. The etiology of TMD in children and adolescents is considered multifactorial, as well as in adults.

Parker (1990) cited that the prevalence of asymptomatic and symptomatic signs related to temporomandibular disorders has increased significantly in recent decades. There are many controversies related to the etiology of these disorders, with the predominant one relating to the multiplicity of factors such as muscle hyperactivity, trauma, emotional stress, malocclusion, in addition to other predisposing, precipitating or perpetuating factors for this condition. Due to the multifactorial etiological complexity and the variety of signs and symptoms that may, generically, also represent other pathologies, the recognition and differentiation of temporomandibular disorders may not be very clear to the professional. Therefore, it is important to carry out, in addition to the routine examination, a targeted anamnesis and a selective clinical examination, so that, in conjunction with the professional's specific knowledge, they lead to the diagnosis and, subsequently, to the elaboration of a treatment plan.

Conti., *et al*. (2003), knowing the great demand of patients and the small amount of information available in the area, it was necessary to multiply studies in the search for answers that can contribute to more effective treatments, also helping to clarify the etiological factors involved in these dysfunctions.

In previous studies, Conti., *et al*. (1996) historically stated that occlusion would be a determining etiological factor in temporomandibular disorders (TMDs), as well as orthodontic treatment. On the other hand, another article by Conti, dating back to 2003, suggested orthodontic treatment to prevent signs and symptoms of TMD, which generated great confusion among researchers.

In fact, in Macnamara (1997), he already stated that the performance of orthodontic procedures did not seem to predispose the individual to present TMD. We can also verify that some TMD signs and symptoms that may appear during orthodontic treatment may not be directly associated with it, as there is a coincidence between the times of treatment and its onset.

Sadowsky (1992) mentioned that the duration of the treatment should also be considered, since this treatment can last for many years, naturally exposing the patient to the appearance of these symptoms.

In previous studies by, Perry (1973) even found TMD symptoms in adolescents and their high tolerance threshold. According to Au-

brey, in 1978, temporomandibular disorders may still not manifest themselves during the years that the professional keeps the patient under observation. However, some of these young patients may have these symptoms, and never mention them to the orthodontist, as they are not related to TMD.

Most orthodontists think that inadequate orthodontic treatment should increase the development of TMD and that proper treatment could prevent it. But Macnamara, in another article in 1997, already noted that there is no clear evidence that stable occlusion prevents signs and symptoms of TMD. Confirming the non-association of orthodontic treatment with clinical signs.

My ideal as a professional in the field working for 26 years is to always have retrospective studies and meta-analyses on hand to analyze the results and confront the most frequent occlusal factors in individuals with and without predisposition to TMD, to finally contribute even more to the focus of etiology, differential diagnosis, and provide a more favorable prognosis for our patient, whether child, adolescent, adult or elderly, and finally alleviate the symptoms of this multifactorial disorder.

Sources

The prevalence of overbite, overjet and crossbite in a sample of Brazilian patients with temporomandibular disorders. Monograph presented to the Specialization Program in Orthodontics at ICS - FUNORTE NÚCLEO TATUAPÉ.

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