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# TEMPOROMANDIBULAR JOINT DISORDERS: SOME CONSIDERATIONS CONCERNING DIAGNOSTIC METHODS AND TREATMENTS

Temporomandibular joint disorders refer to a variety of problems affecting the joint, muscles and other structures associated with the masticatory function. The different signs and symptoms accompanying this disorder may include pain, difficulty in opening one's mouth, chewing or talking, and clicking or popping sounds when opening one's mouth.

Many theories have been proposed to explain the etiology of these disorders, including malocclusions, improper mandible-skull relationship, condylar malposition, teeth grinding and the optimal physiologic mandibular rest position considering the neuromuscular approach. These different schools of thought suggest the use of electronic devices or techniques for diagnostic purposes, such as analysis of occlusion, electromyography, dynamic recording of mandibular movements, sounds and vibrations produced by articulation, or the analysis of condylar concentricity and condition.

**Evidence-based scientific data from acceptable research studies have not been able to show that these recording and analysis techniques are sensitive and specific enough to differentiate between patients with temporomandibular joint disorders and those without such disorders. These tools generate an excessive proportion of false positives with respect to reference standards, as well as weak positive predictive values.**

In other words, none of these methods improves the ability to accurately diagnose temporomandibular joint disorders when compared with anamnesis, a complete clinical examination including the palpation of muscles and joints, the auscultation of joints and the measurement of mandibular movements with a millimeter ruler, and certain imaging techniques for temporomandibular joints. These methods may also lead to mistaken diagnoses for patients suffering from orofacial pain but with no temporomandibular problems.

The belief that any deviation from ideal occlusion, a well-centered condyle position or an optimal neuromuscular mandibular position constitutes an etiological factor explaining temporomandibular joint disorders that simply contributes to designing invasive and costly treatment plans that appear plausible but have not been validated.

Since most of the temporomandibular joint disorders observed in clinics have no known etiology, their treatment should be based on the biopsychosocial model and the use of **reversible** and **non-invasive therapies**. Many reversible approaches have proven at least as effective in relieving the symptoms of temporomandibular joint disorders as most invasive approaches. Long-term studies show, in fact, that many of these disorders simply and naturally improve with time, and that this improvement cannot be attributed to any particular type of biomechanical treatment.

Lastly, in the absence of evidence-based scientific data, the use of diagnostic and treatment methods for temporomandibular joint disorders that do not meet recognized standards for reliability and validity raises some professional ethical issues. It is also important to consider the cost/benefit ratio in choosing treatment.

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