



LETTER TO THE EDITOR

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In the last decade, thanks to the work of several research groups, many advances have been made in the field of orofacial pain and temporomandibular disorders (TMD). These conditions, understood as a complex behavior from the biopsychosocial model of disease, have played a crucial role in this progress.

The biomechanical model of TMD, now half a century old, and with scarce scientific support, was the prevailing etiopathogenic model. Today it has been replaced by an integrated and multidimensional model, which includes other musculoskeletal disorders, persistent pain and loss of function.

The need for a specific diagnosis led to the development of Research Diagnostic Criteria TMD (RDC/TMD), which included the psychosocial axis (Axis II, by self-report) for the first time in a diagnostic classification of chronic pain, in addition to the biological/somatic axis (Axis I, physical examination), matched by the validation of different tools, translation into 22 languages and creation of a network of global collaboration. This resulted in an evolved diagnostic tool (Diagnostic Criteria for TMD)¹ and a taxonomy that also includes less prevalent but clinically important disorders². All these efforts aim to establish the fundamental bases of a classification system that encourages data collection, that is coherent with clinical practice, and that can be adjusted according to the terms of validation.

Some characteristics of this new framework² are:

The use of biomedical ontology to make classifications. It no longer uses only signs and symptoms. This basic change is an important contribution for future more dynamic studies as it allows the use of digital tools, the handling of big data and the development of heuristic models that allow evaluation and adjustment of the initial diagnosis.

- Improvement of the assessment of the psychosocial role, with an undeniable role in chronic conditions, favoring qualitative research in the study of pain.

Orofacial pain: A new approach to temporomandibular disorders.

- Inclusion of headache attributed to TMD, among other additions. Joint work of IHS (International Headache Society) seeks to unify criteria with ICHD (International Classification of Headache Disorders) to have a condition with clear diagnostic criteria in both classifications.

- Inclusion of movement disorders in masticatory muscle disorders. It does not include bruxism, as there is no evidence to classify it as a TMD but just as a possible risk factor; not always have a pathological role³.

Moreover, since the current classification of chronic pain is not adjusted to epidemiology, the International Association for the Study of Pain is doing a classification and methodical diagnosis work, which is both structured and consensual. Not having that classification creates complications in the prevention, diagnosis and management of multiple painful conditions, so it is indeed highly needed and expected. The new classification could be included in the 11th version of the International Classification of Diseases of WHO, including orofacial pain as a disease or clinical entity along with headaches, identifying TMD as the most prevalent and painful orofacial disease⁴.

All these new framings had been impossible without input from studies like the OPPERA Study (Orofacial Pain: Prospective Evaluation and Risk Assessment)⁵. OPPERA is a prospective multicenter study that collects environmental, mechanical, anatomical, physical, demographic, comorbid, genetic data, among others, in order to identify risk factors for painful TMD. This study described, among other findings, that there are population subgroups with similar clinical characteristics for different behaviors over time (phenotypic clusters) and genetic characteristics prone to persistent or painful TMD.

However, we still need to produce more basic science to support the diagnosis of orofacial pain through biomarkers in TMD. The identification of specific genotypes may help to adjust the current taxonomy and suggest the



appropriate therapy for each patient. The addition of a third diagnosis axis, Axis III⁶, has already been suggested. This axis will help relate the subjective pain with physiological pain through genetics, epigenetics, neuroscience, imaging, diagnostic tests and the analysis of big data.

We are currently working on the expansion of the taxonomic criteria of orofacial pain disorders^{7,8}, and we expect to develop other diagnoses in the future. All this should mean a contribution to the treatment of those suffering from these diseases.

Despite the reluctance of some clinicians, these models remain the best evidence available to date. In science,

every instrument is perfectible. Science is responsible for generating new knowledge and clinicians are responsible for using it, making contributions with their experience and what matters most: for helping the patient. The field of orofacial pain is broad and deep; progress will be the result of the sum of all efforts. The first line is drawn and again there is a new challenge to start.

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