

## The International Classification of Orofacial Pain: What Have We Gained, and What Is Still Missing?

In writing this editorial, I have difficulties focusing. My thoughts are roaming; these are exceptional and worrying times. All around the globe we are suddenly cautiously negotiating an unfamiliar territory: the SARS-CoV-2/COVID-19 pandemic. Countries are more or less shutting down, and scientific reports and speculation on this new virus fill media channels and social media every day—how strange it is to think that 3 months ago, we had never heard of it! Case counts and mortality rates are compared between regions from day to day. The differences in attitudes and strategies for management confuse and upset us. Guidelines for how to avoid contracting the virus to protect the most vulnerable and to prevent uncontrolled community spread are advertised everywhere.

On the surface, it may seem farfetched and even offensive to compare a lethal, rapidly spreading disease to orofacial pain. But is it really? Reflecting on the similarities and differences between COVID-19 and chronic pain is not without merits. Albeit not as contagious and dramatic as an acute infection, orofacial pain affects 10% to 15% of the adult population. That is a lot of people! This is often pain that persists for years, and there is no sign of decline in prevalence over time—in fact, the opposite was recently reported.<sup>1</sup> The suffering of the individuals afflicted and the extensive costs associated with both management and consequences of orofacial pain are huge problems for society. It is well known that a range of serious negative consequences exist, among them impaired physical and psychologic functioning resulting in low quality of life, inability to sustain health-promoting behaviors, and temporary or permanent inability to work or study (and thereby, lost worker productivity). In addition, costs of persistent and treatment-resistant pain across the span of health care facilities are increasing steeply, and the resources are limited. In 2010, incremental costs from pain in general were estimated to be up to \$635 billion a year in the US alone.<sup>2</sup>

Considering the obvious loads on individuals and society, it is remarkable that development of preventive or protective measures against chronic pain—including orofacial pain—is not prioritized more. The urgency is understandably less compared to issues of identification and containment of the SARS-CoV-2 because acute situations demand quick and drastic action, but chronic health issues may well be equally devastating in the long run.

With the SARS-CoV-2, there is currently great emphasis on diagnosis. It has become clear that in many cases, symptoms may be modest, and it can thus be suspected that a large number of individuals are (or have been) affected without receiving a diagnosis. The very limited availability of testing has thus become a major point of concern and even a political battle. The uncertainty is stressful, and we demand to know for sure if individuals who display any suspicious symptoms have “coronavirus” or just a common cold or allergic rhinitis. “Testing positive” has quickly become a familiar term to everyone, and in the heat of the moment, the diagnostic accuracy of the testing procedures is less discussed. Test limitations and associated predictive values are overlooked issues that will undoubtedly need to be clarified eventually.

To manage any disease, we need to know who the cases are. In regard to orofacial pain diagnosis, clinical research has for a long time been impeded by uncertainties in case identification, most notably a lack of consensus on specific diagnostic criteria for the disease or disorder in question. In older days, the diagnostic procedure itself was not considered suitable for a scientific approach. Because of the phenotypic continuum in many diseases and disorders, supplemented by variation over time and not least by differences in patients' sickness behavior, standardized testing was not considered possible. Diagnostics was considered to be more of an art than a science, an intuitive skill that could only be developed with time. Understanding of the process has since improved, and what we used to think of as intuition is now explained as pattern recognition. Experience—meaning practice and adequate feedback on earlier judgments—brings speed and confidence, but reliable diagnostic strategies can also be learned by beginners. In fact, in a number of situations, statistical prediction using algorithms has proved superior to clinical prediction, which was first shown in groundbreaking experiments by Paul Meehl in the 1950s and beautifully summarized by the 2002 Nobel Prize winner in Economic Sciences, Daniel Kahneman.<sup>3</sup>

Reliance on algorithms is now a part of everyday life in many areas. In orofacial pain, the demystification of the diagnostic process has perhaps made it easier for us to see clearly that, despite the obvious variation in presentation of most diseases and disorders, some common traits are likely to be sensitive enough to identify the vast majority of cases and specific enough to exclude noncases. Most

of us are now quite open to the notion that common definitions and explicitly agreed diagnostic criteria for diseases and disorders would not only be possible, but also immensely helpful. The challenge is: How do we get there?

When I write this, the first version of the International Classification of Orofacial Pain (ICOP)<sup>4</sup> has been available for only 2 months. But with this suggested common ground for pain clinicians and researchers, a great step forward was taken. For the first time, an overarching classification system is available that comprehends primary and secondary pains in the orofacial area, such as in the masticatory muscles, jaw joints, teeth, and other intraoral structures, and includes inflammatory as well as neuropathic and idiopathic pain. The ICOP proposes definitions and diagnostic criteria for a wide variety of painful conditions. In some cases, these criteria are well supported by data; in others, the lack of high-quality data to rely on is troubling. The impact of expert opinion is traditionally strong, and a sense of certainty in judgment prevails despite the absence of evidence. An example of this is pain originating in the dental pulp and periodontal structures, where no clear association between the true state of the tissues and the symptoms and clinical signs has been identified. Despite this, treatment decisions are made with great confidence by clinicians. We know the evidence is weak, but we still feel certain we are doing right! Kahneman calls this the illusion of validity.<sup>3</sup>

Another central gain from the creation of the ICOP is that by bringing all orofacial pains together into one classification, it becomes much clearer that there are considerable differences in the evidence between areas. For some conditions, such as the most frequent muscle and jaw joint pain diagnoses covered by the DC/TMD,<sup>5</sup> focused research has developed, validated, and disseminated robust diagnostic criteria and examination protocols to clinicians and researchers worldwide. In other areas, the same goals have not yet been reached. To return to my example above, clear knowledge gaps in endodontic diagnostics have been identified that need to be addressed.<sup>6,7</sup>

Fortunately, we now know more than ever about how to perform good diagnostic research. Guidelines are available that can improve the design of specific study types; for example, by minimizing the risk of bias. A commendable international initiative is the EQUATOR (Enhancing the QUALity and Transparency Of health Research) Network, an umbrella organization promoting the use of reporting guidelines with the aim of improving published health research literature by providing online resources.<sup>8</sup>

The next steps for orofacial pain clinicians and researchers should be, first, to start testing the usefulness of this classification and its criteria to categorize

our patients in the clinic. The system needs to be disseminated and discussed. It is hopeful that several endodontic colleagues of mine have said that the ICOP has already been helpful in their specialist practices, especially when dealing with nonodontogenic tooth pain. The second and even more demanding step is to move forward with research. The proposed diagnostic criteria for all diagnoses of painful conditions for which high-quality data do not exist today need to be critically appraised. In the next ICOP version, the criteria should be validated and more consistently operationalized. This is a big task, and we need to work together, following examples set by the INFORM (International Network for Orofacial Pain and Related Disorders Methodology, formerly known as the RCD/TMD Consortium) within the International Association for Dental Research (IADR) and the International Association for the Study of Pain (IASP) Orofacial and Head Pain Special Interest Group.

It has been wisely said that in itself, the diagnosis is not the destination, but a necessary station to pass in the effort to help the patient; a “mental resting place” from which to consider eligible treatments and their prognoses for success. Our first and foremost goal is of course to relieve pain and its consequences in our patients. With agreement on criteria and case identification, I am convinced that we will be better equipped to design adequate pain management and avoid wasting resources on treatments unlikely to improve the patient's situation.

In 2020, the COVID-19 pandemic has changed the world, but this too will pass. We must keep going. Stay safe.

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## References

1. Häggman-Henrikson B, Liv P, Ilgunas A, et al. Increasing gender differences in the prevalence and chronification of orofacial pain in the population. *Pain* 2020. Epub ahead of print.
2. Gaskin DJ, Richard P. The economic costs of pain in the United States. *J Pain* 2012;13:715–724.
3. Kahneman D. *Thinking, Fast and Slow*. London: Penguin Books, 2011.
4. International Classification of Orofacial Pain, 1st edition (ICOP). *Cephalalgia* 2020;40:129–221.
5. Schiffman E, Ohrbach R, Truelove E, et al. Diagnostic Criteria for Temporomandibular Disorders (DC/TMD) for Clinical and Research Applications: Recommendations of the International RDC/TMD Consortium Network and Orofacial Pain Special Interest Group. *J Oral Facial Pain Headache* 2014;28:6–27.
6. Glickman GN. AAE Consensus Conference on Diagnostic Terminology: Background and perspectives. *J Endod* 2009;35:1619–1620.
7. Swedish Council on Health Technology Assessment. *Methods of Diagnosis and Treatment in Endodontics: A Systematic Review* [Internet]. Stockholm: Swedish Council on Health Technology Assessment (SBU), 2010.
8. The EQUATOR Network. <https://www.equator-network.org>.