

Orofacial Pain: Quo Vadis?

In this first issue of the *Journal of Orofacial Pain* this millennium, I would like to give briefly my perspective on what progress the field of orofacial pain has made since the journal was established, what directions need to be emphasized in the future, and how the journal may play a significant part in these directions. During the past 2 decades we have seen, for example, the discovery in the brain of several endogenous neurochemicals and intrinsic pathways and their influences on nociceptive transmission and orofacial pain behavior; improvements in pharmacologic, surgical, and behavioral management of pain; the recognition of the importance of psychosocial factors in orofacial pain expression and behavior; the development of concepts and insights of peripheral sensitization and central sensitization and their significance to acute or chronic pain; the recognition of the neuroplasticity of pain processes, which, along with their associated circuits, are not "hard-wired" but are modifiable and can indeed be modulated by a number of factors; and the rapid expansion of brain imaging and molecular and gene biology and their applicability to the pain field.

Despite these advances in knowledge and approaches to diagnosis and management, there are still many questions facing the orofacial pain field. For example, I pointed out above that we know that the nervous system can undergo neuroplastic changes in chronic or persistent pain. But how are the neural connections "rewired"—and what are the underlying cellular and molecular mechanisms? In addition, although we know that there are inhibitory neural control mechanisms present in the brain that can be recruited to counteract painful experiences, why are they so frequently insufficient to control the development and maintenance of chronic pain? Also, what are the relationships between pain and gender, and what is the neural substrate underlying the high female predominance in many chronic pain states? To what extent are genetic factors involved in the

expression of pain? What are the brain mechanisms and the full range of psychologic factors that cause some persons to seek out care and others not, and what societal influences promote these behaviors?

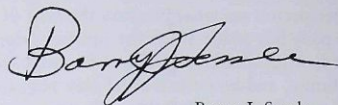
These are just some examples reflecting the issues and challenges in the orofacial pain field. Let me also give examples of what areas might be emphasized in the future to address some of these and other related questions:

- Identification of the biomechanical factors and chemical mechanisms that underlie the expression of orofacial pain and the repair and regeneration of orofacial tissues
- Determination of the functional and clinical circumstances in which these chemical mechanisms and associated processes in peripheral tissues or in the brain become operational or dysfunctional
- Development of additional animal models to clarify the mechanisms by which the nervous system detects and regulates the functional and dysfunctional states of orofacial tissues
- Clarification of the physiologic, pharmacologic, cellular, and molecular levels of the neural plasticity that may occur following orofacial injury or repair
- Definition of the "markers" and physical and psychosocial factors that indicate or predict the progression or regression of orofacial conditions manifesting pain or neuromuscular dysfunction
- Further delineation of the gender and genetic factors that influence orofacial pain and the underlying cellular and molecular mechanisms
- Clarification of orofacial parafunctional behaviors and their relation to pain and different states of consciousness
- Assessment of the cost-effectiveness, based on the accumulated evidence-based data, of interventions targeted toward diagnosis, management, and prevention of various orofacial pain conditions

- Application of new or improved therapies and technologies to orofacial pain research and clinical approaches, as a result of the above advances in knowledge
- Initiatives to enhance pain education for health science students, clinicians, and the public
- Further development of the critical mass of well-trained researchers and clinicians that is needed in disciplines related to orofacial pain
- An increase in the visibility and profile of the orofacial pain field

I believe that the recent editorial changes to the *Journal of Orofacial Pain* put it in a significant position for making important contributions to the field. Its mandate to continue to publish high-quality research papers will allow the readership to be kept abreast of the most recent advances in knowledge pertinent to the above approaches. Also, our recent decision to publish invited topical reviews and focus articles on a regular basis in the journal will provide our readers with an up-to-date synthe-

sis of relevant topics and insights into controversial matters that are of significance to orofacial pain and related conditions. The journal is also taking innovative approaches to publishing, as exemplified in this issue by the article by Chen et al that utilizes Internet-based animation to illustrate condylar movements. In addition, the journal is now indexed in several citation services, and I am confident that with its wider range of high-quality papers, articles in the journal will be more frequently cited. Through approaches such as these, the journal will thereby make a significant contribution toward raising the visibility and profile of the field of orofacial pain.



Barry J. Sessle
Editor-in-Chief

MAYO CLINIC OROFACIAL PAIN CONSULTANT

The Department of Dental Specialties at Mayo Clinic Rochester is seeking a full-time staff consultant in orofacial pain. Primary responsibilities include comprehensive diagnosis and management of the full scope of orofacial pain conditions. A background indicating a strong commitment to independent research and education is necessary. The applicant must have completed formal training in orofacial pain, and preferably in oral medicine as well, in accredited academic institutions. Board certification in orofacial pain and orofacial medicine is highly desirable. Interested individuals should send curriculum vitae and the names of three references to:

Kevin I. Reid, DMD
Chair, Department of Dental Specialties
Mayo Clinic
200 First Street, SW
Rochester, MN 55905
Fax: (507) 284-8082

Mayo Foundation is an affirmative action and equal opportunity employer and educator.