

## Sex, Gender, and Pain

This issue of the *Journal of Orofacial Pain* has a particular focus on differences between males and females in various aspects of orofacial pain. There is currently much conjecture about these differences and the basis for them. The focus article, "Gender Differences in Pain," by Drs Dao and LeResche and the 3 accompanying critical commentaries by Drs Eli, Giamberardino, and Maixner draw attention to the literature on gender and pain conditions in general that discloses a disproportionate representation of women receiving treatment for many pain conditions. It appears that, compared to men, women generally report more frequent pain, more severe pain, and pain of longer duration. This is also noted in the topical review, "A Unified Concept of Idiopathic Orofacial Pain: Pathophysiologic Features," by Drs Woda and Pionchon, also published in this issue.

In the case of orofacial pain, both sets of articles point out that most types of chronic pain in the orofacial region, including headaches, also have a significantly higher prevalence in women. Sex differences may also be manifested when pain is experimentally induced in men and women, as Dao and LeResche have outlined. These include lower pain threshold and tolerance in females. It has also become apparent from animal studies that there are sex differences in relevant hormonal factors and peripheral and central neural processes related to pain, although it is still unclear to what extent the reported gender differences in pain in humans reflect differences in the way men and women respond to pain or in the social "rules" or

expectations for the expression of pain, rather than the biologic differences in these hormonal factors or neural processes. Dao and LeResche propose that the higher prevalence in women of chronic orofacial pain is a result of both sex differences in generic pain mechanisms (which they broadly define in terms of perceptual, cognitive, emotional, psychosocial, and nociceptive) and to as-yet unidentified factors that are unique to the craniofacial system. The 3 critical commentaries generally concur with their proposition, although each places a different emphasis on the range of factors proposed to account for the higher female prevalence and on the significance and value of experimental pain studies to the clinical picture. In addition, Maixner raises the interesting prospect that evolutionary pressures may contribute to the sex differences in pain, Eli emphasizes the need for increased research focus on the interactions between these factors, and Giamberardino emphasizes that sex should not be a prejudicial factor in the evaluation of pain patients' symptoms and their treatment.

The various articles provide a comprehensive and sometimes provocative review of this topical issue that is relevant to any reader who must deal clinically or experimentally with chronic orofacial pain conditions.



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