Orofacial Pain: A Primer

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KEYWORDS

• Orofacial pain • Myofascial pain • Temporomandibular disorder

KEY POINTS

- Orofacial pain refers to pain associated with the soft and hard tissues of the head, face, and neck. It is a common experience in the population that has profound sociologic effects and impact on quality of life.
- New scientific evidence is constantly providing insight into the cause and pathophysiology of orofacial pain including temporomandibular disorders, cranial neuralgias, persistent idiopathic facial pains, headache, and dental pain.
- An evidence-based approach to the management of orofacial pain is imperative for the general clinician.

INTRODUCTION

Orofacial pain refers to pain associated with the soft and hard tissues of the head, face, and neck. The potential origin of orofacial pain includes pulpal and periodontal, vascular, gland, muscle, bones, sinuses, and joint structures. These numerous structures in the head and neck along with their complex innervation account for the wide range of diagnostic possibilities in patients with the complaint of orofacial pain. The diverse potential for pain arising from the vast area of trigeminal innervation accounts for the need for interdisciplinary collaboration in the evaluation and treatment of these complex patients. Orofacial pain is a common experience in the population that has profound sociologic effects and impact on quality of life. It is estimated that one-third of the population of industrialized nations suffers some chronic pain and the oral health care provider will undoubtedly treat patients with orofacial pain. The cost of chronic pain is in the billions of dollars annually in the United States for health care services, loss of work, decreased productivity, and disability compensation. New scientific evidence is constantly providing insight into the cause and pathophysiology of orofacial pain. An evidence-based approach to the management of orofacial pain is imperative for the general clinician.

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PROFESSIONAL RESPONSIBILITY

Pain in the oral and maxillofacial system represents a major medical and social problem in the United States. The US Surgeon General's report on Oral Health in America noted that oral health means more than healthy teeth; it means being free of chronic orofacial pain conditions (http://www.nidcr.nih.gov/DataStatistics/SurgeonGeneral/Report/ExecutiveSummary.htm).

The astute clinician possesses a working knowledge of the basic and clinical science of orofacial pain. To effectively evaluate and treat these patients, the clinician needs to ask questions, analyze answers, further question the patient, and synthesize information. The clinician must perform a proper clinical assessment including a comprehensive head and neck and dental physical examination, neurologic testing, range of motion studies, laboratory evaluation, and perhaps consultations with other health care providers. In addition, the clinician must develop a plan of treatment that is consistent with the standard of care set forth by current scientific literature and evidence. When the scope of care falls beyond the individual expertise of a clinician a team approach should be used and the patient should be referred.

Orofacial pain may be derived from many unique tissues of the head and neck, and subsequently has several unique physiologic characteristics compared with other pain systems, such as back or spinal pain. It is not surprising that accurate diagnosis and effective management of orofacial pain conditions represents a significant challenge for health care providers. Yet, this is an emerging and ever-growing area of dental practice. According to Hargreaves,[1] publications in the field of orofacial pain have demonstrated a steady increase over the last several decades. Robert and colleagues[2,3] published a bibliometric analysis of the scientific literature on pain research that was published in 2008. This paper demonstrated how complex the literature on orofacial pain is, indicating that 975 articles on orofacial pain were published in 275 journals from authors representing 54 countries. One of the biggest barriers for improved patient care and translational research has been the lack of a validated diagnostic criteria and varying terminologies between major groups that study pain.[1] Although efforts have been made to classify patients with temporomandibular disorders with research diagnostic criteria for temporomandibular disorders,[4] headache patients with the International Headache Society criteria, and orofacial pain with the American Academy of Orofacial Pain standards, clinical research suggests that these methods are incomplete for comprehensive diagnosis of patients with orofacial pain.[5,6] It is clear that translational research is necessary to ultimately improve diagnosis and patient care in patients with orofacial pain (**Table 1**).

EPIDEMIOLOGY OF OROFACIAL PAIN

Numerous reports in the scientific literature have attempted to identify the epidemiology of orofacial pain. The 1986 Nuprin Pain Report noted that most Americans experience an average of three or four different kinds of pain annually.[7] Crook and coworkers[8] reported that 16% of the general population suffered pain within a 2-week period. James and colleagues[9] in 1991 reported that greater than 81% of the population reported a significant jaw pain experience over the course of their lifetime. Lipton and coworkers[10] in 1993 noted that 22% of Americans reported orofacial pain within a 6-month period. Although the orofacial pain most commonly experienced by patients and encountered by oral health care providers is toothache, orofacial pain seldom seems to be an isolated complaint.[11] Türp and colleagues[12] noted that more than 81% of patients reporting to an orofacial pain center had pain sources beyond the trigeminal system. Common comorbid conditions include fibromyalgia, chronic