Orofacial pain: A bird’s eye view

Pain is a subjective expression. An individual learns its expression through experiences encountered in the early life.[1] Pain is an unpleasant emotional and sensory experience related to noxious or potentially noxious stimuli.

In the medical model, pain is considered an expression of a disease which should be diagnosed and treated. Unfortunately, it is not always possible to establish a cause and diagnosis relating the symptoms. Attempts to identify a substantial cause repeatedly may lead to needless and occasionally harmful investigations and treatments. In such situations, establishing a precise diagnosis and the following effective management protocol is challenging. This paved the way for introduction of a biopsychosocial or biobehavioral model to explain the pathophysiology of chronic pain. In this model, pain is not divided into physical or psychological components. In fact, physical, psychological, and social factors are considered as mutually influential forces with the potential to create a vast number of distinctive pain experiences. The biologic system deals with the structural and molecular basis of a disease. The psychological system deals with the role of motivation and personality on the experience of illness and individual reactions toward it. The social system deals with cultural, environmental, and familial influences on the expression and experience of illness. Each system affects and is affected by all of the others.[2]

Orofacial pain is defined as any pain related to the teeth and surrounding tissues.[3]

Pain can be classified as acute and chronic, by onset. Pain can be categorized as Somatic, neuropathic, and psychogenic pain. Somatic pain results from unusual stimulation of the normal neural structures. Neuropathic pain results from structural abnormalities of the nervous system. There is no obvious identifiable physiologic or natural cause for psychogenic pain. Intracranial, extracranial, musculoskeletal, neurovascular, and neurogenic are said to be the type of tissue system from which pain originates. Intracranial (within the skull) or extracranial (outside of the skull) pain includes Idiopathic pain (atypical odontalgia, Burning mouth syndrome, Atypical facial pain), Musculoskeletal pain arising from masticatory muscle disorders, temporomandibular joint dysfunction and tension-type and cervicogenic (neck origin) headaches, Neuropathic pain which can be episodic or continuous in nature, neurovascular pain, psychogenic pain and pain associated with other diseases, e.g., dental decay and abscess, periodontal disease, tumors, ulcers in the mouth, xerostomia, trauma, distant pathology (referred pain), systemic diseases, cancer, etc.

The procedures for easing the diagnosis of orofacial pain includes general physical examination along with history, functional analysis of the jaw, diagnostic nerve blocks, Numerical Rating Scale, Visual Analog Scales and other scales for pain assessment. Radiological examination such as orthopantomography, computerized tomography scan, magnetic resonance imaging can be performed to assess any organic causative factor for pain. Neurophysiological procedures, electromyography, radiological, physiological and psychological investigations help in confirming a diagnosis and assist in treatment planning.

The management of chronic orofacial pain is more challenging than acute pain. Patients usually initiate therapy by self-medicating themselves before consultation with the specialist. The use of non-steroidal anti-inflammatory drugs (NSAIDs) and steroids in the pre-, post- and intra-operative phases is valuable in terms of pain reduction. In the case of oral tissue infection, antimicrobials in conjunction with analgesics help reduce microbial load and inflammation and provide relief to a large extent. Potent corticosteroids such as triamcinolone acetonide are prescribed for post treatment pain.

Orofacial pain could also be a presenting complaint in patients with cancer, either due to the tumor itself or secondary to cancer therapy and require treatment with NSAIDs, opioids and topical/systemic anesthetics.[4]

Evidence supports that the use of intraoral acrylic splints has an effect on myofascial pain. Mobilization exercises for mandible and condyle-disc complex, manual distraction of the joint junction, correction of body posture and relaxation will provide significant pain relief in treating temporomandibular disorders. Glycosamine and chondroitin sulfate may also be administered orally.

Oral pain due to salivary gland obstruction can be best managed by relieving the duct pressure; this can be achieved by removal of the calculi and dilatation of the site of stenosis.

For vascular pain usually sumatriptan is advised, the drug can be administered through the intranasal route as well. Verapamil, corticosteroids, valproic acid, serotonin inhibitors, topiramate and naratriptan are also used for background treatment. In paroxysmal hemicranias patients indomethacin is prescribed.

Long-standing psychotropic medications are usually used for chronic facial pain syndromes it is known to have severe side effects and provide near total pain relief.

When the exact etiology for a patient’s pain is unavailable, the management should be with an interdisciplinary frame
Interdisciplinary therapy includes education, counselling, pharmacotherapy, pain management techniques (e.g., transcutaneous electrical nerve stimulation techniques, nerve-blocking procedures, and acupuncture), psychological therapy (e.g., cognitive, behavioral), relaxation training (e.g., biofeedback, yoga, and meditation), hypnosis, occupational therapy, physical therapeutic modalities such as thermal and ultrasonic therapies, postural training, and stretching, strengthening, and conditioning programs.\textsuperscript{[3,5]}

The general dental practitioner and dental specialists encounter and treat patients with pain on a day to day basis. Management of orofacial pain as a separate dental specialty is emerging worldwide. In addition to the diagnosis and treatment of acute dental pain and pathology, such as that which may arise from trauma, infection, or other odontogenic origin, the orofacial pain dentist has the responsibility to diagnose and treat nonodontogenic orofacial pain that is usually chronic, persistent and multifactorial. The complexity of chronic pain is such that it is distressing, and debilitating affecting quality of life adversely. Inadequate knowledge of the etiopathology of pain and the neurobiological mechanisms underlying persistent pain can lead to inaccurate diagnoses and subsequent ineffective or harmful treatment. The orofacial pain specialist also holds the responsibility of assessing the need for multidisciplinary approach and to make appropriate referrals in a judicious manner. The complexity of the spectrum of orofacial pain disorders is compounded by the close proximity of numerous anatomical structures, including the eyes, nose, teeth, tongue, sinus ears, regional muscles, and the temporomandibular joints. These structures may be the source of facial pain that can refer to nearby but uninvolved areas. It is not uncommon for cross-referral to occur between headaches and other painful conditions associated with the orofacial region. Pain of any origin compromises on an individual’s quality of life. Thus, prevention and management of pain are an important aspect of health care.

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