

Orofacial Pain- Challenge To Dental Surgeons

Dr. N.Aravindha Babu, Dr.Sudakshina Mukherjee, Dr. E.Rajesh, Dr. N.Anitha

*Department of Oral pathology and Microbiology
Sree Balaji Dental College and Hospital and Research
Bharath Institute of Higher Education*

ABSTRACT:

Pain is the most common symptom reported to the physicians. Orofacial pain is one of the commonest complaint that affects millions of people around the world on a daily basis. It constitutes any symptom that occurs from a large number of disorders and diseases that result in a sensation of discomfort or pain felt in the region of face, mouth, nose, ears, eyes, neck, and head. Orofacial region often sparks an immediate attention response consisting of a significant level of concern and worry. Use of a wide range of treatments though available but clinician should not get confused by that an early diagnosis, reassurance to patients and patient family and often following some simple physiotherapy especially those with coping strategies turns out to be effective.

KEYWORDS: Orofacial pain, Neuropathic pain, Idiopathic pain, Pain rating scale

INTRODUCTION: IASP (International association for Study of Pain) defines pain as ‘an unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in term of such damage’ [5]. A skeletal structure is required for accurate diagnosis which should be began with taking a very careful history. Commonest acute causes of pain are generally dental origin and dentists are capable of managing these. The most common non dental pains are temporomandibular disorders (TMDs), typically involving the muscles of mastication either unilaterally or bilaterally and may be associated with other chronic pains. Use of a wide range of treatments though available but clinician should not get confused by that an early diagnosis, reassurance to patients and patient family and often following some simple physiotherapy especially those with coping strategies turns out to be effective. Neuropathic pain may be unilateral and episodic type characterized by severe electric shock like pain, often triggered by light touch, responds best to carbamazepine. Trauma, major or due to dental procedures, results in neuropathic pain which then managed like other neuropathic pain. Diseases like giant cell arteritis in 50 yr old, and cancer can present as a progressive neuropathic pain. Burning mouth syndrome principally seen in peri-menopausal women is thought to be of psychological origin. A multidisciplinary team required for Chronic pain management. Diagnosis be an important feature as been rightly shown by Durham and colleagues [5], lack of which in a case of temporomandibular disorders (TMDs) had a direct impact on sufferers’ daily lives. Recently there been increase in professional interest for orofacial pain disorders. A budding field with unique experience is coming out regarding the management of orofacial pain disorders which suggests that pain is a protective mechanism against

APPROACH TO PATIENT: The backbone of an accurate diagnosis lies in the diagnosis and proper history taking. History can lead to appropriate diagnosis and a proper treatment plan.

History Taking should be as follows [4]

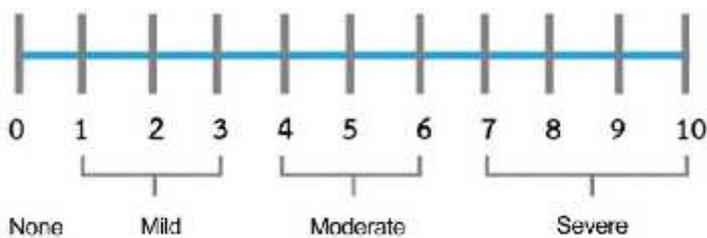
- Timing: includes the onset, duration, and periodicity.
- Location and radiation: (e.g. nerve distribution).
- Quality and severity.
- Relieving and aggravating factors (e.g. effect of hot/cold and sweet foods, prolonged chewing, eating, brushing habit, touching the face).

- Associated factors (e.g. taste, salivary flow, clenching, bruxing habits, locking or clicking of jaw joint).
- Other pain conditions (e.g. headaches, migraines)
- Impact of pain (e.g. sleep, fatigue, beliefs, and quality of life).

Assessment of pain

Rating scale techniques are used. The most commonly used techniques are:

- Numerical Rating Scale
- Visual Analogue Scale
- McGill Pain Questionnaire
- Behavioral Rating Scale



Numerical Rating Scale

Patients rate their current pain intensity from 0 (“no pain”) to 10 (“worst possible pain”), most widely used instrument for pain screening. It is shown in Figure 1^[2,5,6,7]

FIGURE-1

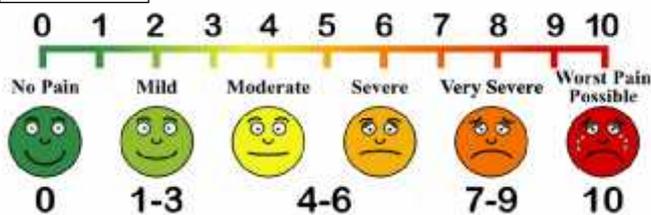


FIGURE-2

Visual Analogue Scales (VAS):

It consists of a 10 cm line with anchor

points at each end. The VAS more widely used^[5,8], Fig-2

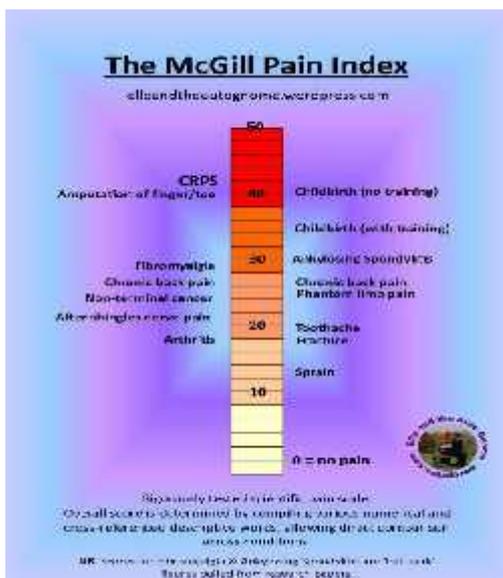


FIGURE-3

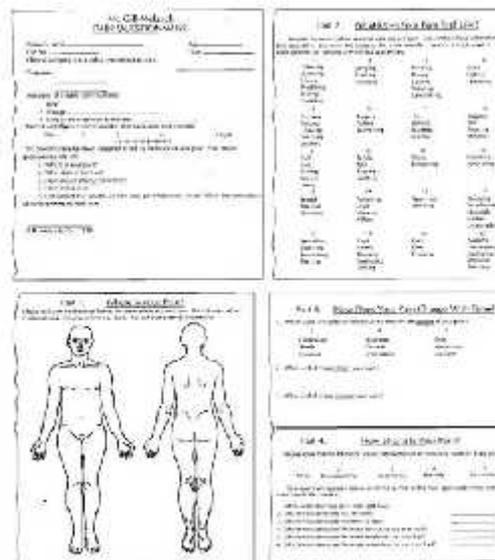


FIGURE-4

McGill Pain Questionnaire (MPQ):

Another name is McGill pain index. Developed by Melzack and Torgerson in 1971 at McGill University. The questionnaire itself is a self-report that allows patients to provide a proper good description of the quality and intensity of their pain. It is a very widely used questionnaire. This is shown in Figure 3,4^[5,8].

Behavioral rating scale: For patients unable to provide a self-report of pain, a score from 0 to 10 is assigned based on clinical observation.

MEASURING PAIN FOR COGNITIVELY IMPAIRED PATIENT : In this case doctors mostly emphasize the patients’ behavior to obtain clues as to the presence of pain, e.g. restlessness, crying, moaning, groaning, grimacing, resistance to care, reduced social interactions, increased wandering, not eating and having sleeping problems^[9].

Extraoral examination

It is confined generally in the visual inspection to the head And neck region for any colour changes, swellings, and skin lesions, palpating lumps or any salivary glands sometimes indicated. Examining muscles of mastication, head and neck muscles for tenderness and trigger points, muscle hypertrophy, and movement abnormality of the temporomandibular joint.

Intraoral examination: involves the hard tissues and teeth for any dental pathology like decay, mobile teeth, excessive wear facets (indicates bruxism), abnormal occlusion, ability to open. Careful examination of oral mucosa for soft tissue lesions.

INVESTIGATIONS

Use of questionnaires regarding assessment of pain is always helpful. Laboratory investigations are not significant, except in the diagnosis of cranial arteritis and disorders such as Sjogren’s syndrome. Dental OPGs and X-rays are very useful for bony lesions or cysts and are easily available in hospitals but also in larger dental practices.

Acute facial pain : The conditions referred under this are rarely seen in pain clinics as they are majorly falls under core dentists regimen and thus generally effectively managed by the dental profession.^[10]

Imaging: Imaging best method to confirm a suspected tumor, infection, or inflammation. Many disorders clinically do not produce abnormality but may be seen with imaging and hence provide greatest value to rule out serious life threatening diseases [2].

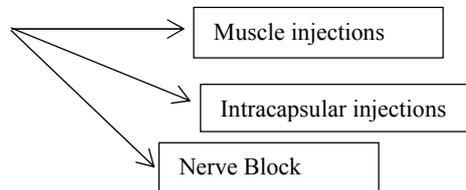
Laboratory test: When a clinician when suspects significant systemic problems, they go for laboratory tests. Blood test help to rule out other systemic conditions [2].

Confirmation of the clinical diagnosis :

4 methods namely-

- Diagnostic analgesic blocking
- Utilization of diagnostic drugs
- Consultation
- Trial therapy

Diagnostic analgesic blocking



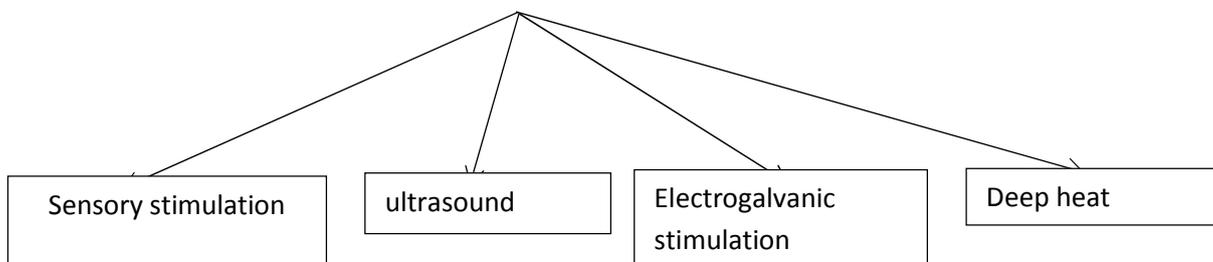
Essential to differentiate primary from secondary pain. Skillful analgesic blocking of muscles of masticatory system, maxillofacial region and TMJ are very useful in the diagnosis of masticatory pain and nonmasticatory myofascial pain disorders [2].

Trial therapy: A short period of trial therapy is a good means of confirming a diagnosis, provided the examiner is familiar with the effects of placebo therapy.

The pain management covers following factors [11]:

- Elimination of causative noxious stimuli
- Interception of nociceptive circuits
- Enhancement of neural mechanism of pain inhibition [12]

Physical therapy: Physical therapy modalities refer to those treatments that utilize an instrument, device or agent to accomplish the desired effect.



Management of Special Orofacial Pain Disorders:

Facial neuralgias:

The classic neuralgias that affect the craniofacial region characterized by (a) brief episodes of shooting, electric shock-like pain along the course of the affected nerve branch; (b) trigger zones on the skin or mucosa that cause painful attacks when touched; (c) pain-free periods between attacks and refractory periods immediately after an attack, during which a new episode cannot be triggered [13].

Periodontal diseases:

Periodontal pockets: Management includes pocket irrigation and flap surgery

Chronic periodontitis: Management includes oral prophylaxis and flap surgery

Aggressive periodontitis: It is managed using antibiotics depending on the type of microorganisms. If microflora contains gram-positive microorganisms, then it should be treated with 250 mg amoxicillin and 125 mg potassium clavulanate three times daily, for 14 days, along with scaling and root planning) and if flora is gram-negative, then clindamycin should be given with doses of 150 mg, four times a day, for 7 days, along with scaling and root planning [14].

Periodontal abscess: Pain due to periodontal pain is managed using the following methods [14]

- Analgesic and antibiotics
- Incision and drainage
- Debridement of root surface by removal of granulation tissue should be done.
- Extraction of tooth

Occlusal trauma

A goal of periodontal therapy in the treatment of occlusal trauma should be to maintain the periodontium in comfort and function [14,15]. Steps followed as-

- Occlusal adjustment
- Management of parafunctional habits
- Temporary, provisional or long-term stabilization of mobile teeth with removable or fixed appliances
- Orthodontic tooth movement
- Occlusal reconstruction
- Extraction of selected teeth

Vascular causes

Oftengiant cell arteritis in patient over 50 years presents with pain in the temporal region which mimic TMD can result in blindness if left untreated. ESR and C reactive protein are typically raised and referral for biopsy should be requested urgently. [16] Post-stroke pain can affect part or the whole of the face. Management is same as neuropathic pain. [17]

Persistent idiopathic facial pain PIFP (atypical facial pain) : When patients present with symptoms that do not fulfil any criteria currently available, then a diagnosis of persistent idiopathic facial pain (atypical facial

pain) is made. Rarely, Management includes use of antidepressants often combined with cognitive behaviour therapy. It is important for the patient's pain to be acknowledged as real.^[18,19]

CONCLUSION: Orofacial pain is equally distressing for both dentists and patients. Diagnosis of orofacial pain is challenging for dental practitioner in most of the cases apart from few. Patient psychology plays a major role in many cases. Based on caring and supportive attitude, a correct patient stratification and disciplinary approach will form beneficial standards for application of current knowledge in treating orofacial pain disorders.

REFERENCES:

- [1] Merskey H, Bogduk N. Classification of Chronic Pain. Descriptors of Chronic Pain Syndromes and Definitions of Pain Terms, 2nd Edn. Seattle: IASP Press, 1994
- [2]. Okeson JP. Bell's Orofacial Pain: The Clinical Management of Orofacial Pain. (6th edn.), Quintessence Publishing Co. Ltd, New Malden, Surrey, 2005
- [3]. Greenberg MS, Glick M, Ship JA (1994) Burket's Oral medicine: Diagnosis and Treatment (9th edn.), JP Lippincott Company, Philadelphia.
- [4] J. M. Zakrzewska. Differential diagnosis of facial pain and guidelines for Management; British Journal of Anaesthesia (2013).
- [5]. Coffey GH, Mahon MV Pain: theories and a new approach to treatment. J Natl Med Assoc 74:1982.
- [6]. Monheim LM Monheim's Local Anesthesia and Pain Control in Dental Practice. (7th edn.), Mosby, St. Louis 1983.
- [7]. Conti PC, Pertes RA, Heir GM, Nasri C, Cohen HV, et al. (2003) Orofacial pain: basic mechanisms and implication for successful management. J Appl Oral Sci.
- [8]. ICD-9 CM (2009).
- [9] K.M.K Masthan, S. Bhuminathan, N. Aravindha Babu: Text Book Of Orofacial Pain; 2012
- [10] Hegarty AM, Zakrzewska JM. Differential diagnosis for orofacial pain, including sinusitis, TMD, trigeminal neuralgia. Dent Update 2011
- [11]. Degenaar JJ Some philosophical considerations on pain. Pain 1979.
- [12]. Fine PG, Milano R, Hare BD: The effects of myofascial trigger points injections are naloxone reversible. Pain 32 1988.
- [13]. Burket LS, Greenberg MS, Glick M, Ship JA (2008) Burket's Oral Medicine. (11th edn.), BC Decker Inc, Hamilton.
- [14] Ghom AG, Ghom SA Text Book of Oral medicine. (2nd edn.), JP Medical Ltd, London (2008).
- [15] American Academy of Periodontology Parameter on occlusal traumatism in patients with chronic periodontitis. J Periodontol 2000
- [16] Hassan N, Dasgupta B, Barraclough K. Giant cell arteritis. Br Med J 2011.
- [17] Klit H, Finnerup NB, Jensen TS. Central post-stroke pain: clinical characteristics, pathophysiology, and management. Lancet Neurol 2009.

[18] List T, Axelsson S, Leijon G. Pharmacologic interventions in the treatment of temporomandibular disorders, atypical facial pain, and burning mouth syndrome. A qualitative systematic review. *J Orofac Pain* 2003.

[19] Aggarwal VR, Lovell K, Peters S, Javidi H, Joughin A, Goldthorpe J. Psychosocial interventions for the management of chronic orofacial pain. *Cochrane Database Syst Rev* 2011