



GLOBAL YEAR AGAINST
OROFACIAL PAIN
OCTOBER 2013 – OCTOBER 2014

Odontogenic / Dental Pain

Facial pain of odontogenic origin must not be overlooked as a possible source of chronic or complex orofacial pain. The assumption that a patient enjoys good dental health may not always be true. Pain arising from the teeth and supporting structures must always be considered during any examination of a facial pain patient.¹

Common sources of odontogenic pain include:

- Dental caries into dentine
- Dental caries into dental pulp
- Pulpal infection
- Pulpal necrosis
- Periapical/Periodontal abscess
- Cracked teeth
- Dental trauma

Pulpal tissue responds with pain to any direct stimulation. Onset of pain may be provoked or is seemingly spontaneous, often presenting as a diagnostic problem when no obvious dental source is observed. For example, provocations of a cracked tooth often results in short, sharp, shock-like pain upon provocation. This can be difficult to diagnose. The quality and duration of these types of odontogenic pain may present with a neuralgic quality similar to trigeminal neuralgia.

Dental caries that penetrate into the underlying dentin is often visible by gross inspection and may render a tooth sensitive to thermal or chemical stimulation. Mild decay may cause limited sensitivity to hot, cold, or chemical (i.e., sweet or acidic) stimulation. Pain is typically localized, aching, and transitory. Advanced decay may elicit a more significant, prolonged, and aching pain. Pulpal pain secondary to inflammation, when stimulated, may result in prolonged and significant discomfort. Although pulpal pain is usually perceived to be localized, referred pain to other orofacial regions is common. Transient pulpitis may have similar feature of migraine; i.e., unilateral, pulsatile, and episodic.





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Inflamed pulpal tissue may eventually become necrotic or infected. Exudate may leak into the periodontal space at the apex of the tooth, resulting in tenderness during mastication, throbbing pain, and referred pain to other parts of the head and/or neck. As the periodontal ligament (the attachment between the root of the tooth and alveolar bone) is richly innervated, inflammatory, or purulent exudate from an infected tooth into this periodontal space can cause exquisite tenderness provoked by any manipulation of the tooth. In addition to pain, swelling often accompanies infection of the periodontal structures. Dental infections of this type, especially in the anterior maxilla, have similar characteristics to that of a trigeminal autonomic cephalgia; i.e., severe pain around or under the eye.

When considering the location, duration, quality, frequency, intensity, provoking, and ameliorating factors of primary odontogenic pain, it becomes clear that all orofacial pain patients must receive a thorough dental evaluation before moving on to other considerations of a more complex nature. That being said, when considering the broad similarity of complaints of odontogenic pain to other orofacial pain entities, if dental pathology is not present, the clinician must move on to other etiologies.

ⁱ Heir GM. Facial Pain of Dental Origin--A Review for Physicians. *Headache*. 1987;27(10):540-

