

# THE LADY WITH “ELECTRICAL” FACIAL PAIN

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## Case History

A 38-year-old female, referred by her primary-care doctor, presented to a multidisciplinary pain center complaining of facial pain. The pain was described as a sharp, electrical pain localized to the left face. It was reported as being centered around a tooth in the maxilla that had recently been restored with a composite filling material. The patient, a school teacher, reported the pain as being triggered by talking, eating, as well as when she brushed her teeth. The pain had been present for 6 months and had been partially responsive to carbamazepine at a dose of 400 mg per day. She reported she could no longer teach as the pain prevented her from speaking. She had lost 10 pounds in the 6 months since the pain's inception.

She had been in a long-lasting relationship that she described as happy and fulfilling. She had however noted she was shying away from intimacy, as kissing would aggravate the pain. This was creating issues in the relationship that had not previously been present. The patient was convinced there was a problem with the tooth, despite seeing her general dentist, an endodontist, and an oral surgeon, who were all at a loss for the cause. The oral surgeon said he would extract the tooth if she insisted, although he did not feel it would be beneficial.

## Questions on the Case

Please read the questions, try to answer them, and reflect on your answers before reading the author's discussion.

- What is the likely diagnosis?
- What is the relevance of the dental therapy?
- What is the relevance of her age?
- How does one investigate the pain? Is there a need for special tests?

- What are the therapeutic options? How would you approach this short term and what considerations would you give this for the long term?

## Case Discussion

The differential diagnosis for facial pain presenting as an intermittent sharp, electrical pain should include dental, neuropathic, and neurovascular etiologies. Musculoskeletal etiologies are not usually sharp and electrical, and especially do not last seconds to minutes. An organ system classification has been used to help delineate facial pain and is summarized in Table 40-1.

### Extracranial Pain

Tooth pain is one of the “extracranial” structures and the most common cause of orofacial pain. Most frequently, dental pain is related to dental caries, presenting as a reversible pulpitis. The reversible pulpitis is characterized by poorly localized pain, often sensitive to hot or cold stimuli. The reaction to the noxious stimulus (hot or cold) disappears soon after its removal. Eventually, when the carious lesion invades the pulp, an irreversible pulpitis begins. This is characterized by a lingering reaction to noxious stimuli such as

**Table 40-1. Organ System Classification for Orofacial Pain**

Organ	Presence	Quality
A. Extracranial	Continuous or intermittent	Dull/variable
B. Intracranial	Continuous	Variable
C. Psychogenic	Variable	Variable
D. Neurovascular	Intermittent	Throbbing
E. Neuropathic	Intermittent	Sharp, shooting, electric
	Continuous	Burning
F. Musculoskeletal	Continuous	Dull, aching