Differential diagnoses for persistent pain after root canal treatment: a study in the National Dental Practice-Based Research Network


**Clinical Questions**: Pain present 6 months after root canal treatment (RCT) may be of odontogenic or nonodontogenic origin. What are the specific diagnoses of patients reporting pain 6 months after receiving initial orthograde RCT?

**Clinical Bottom Line**: Most patients reporting tooth pain 6 months after RCT had a nonodontogenic pain diagnosis accounting for this pain, with temporomandibular disorder (TMD) being the most frequent diagnosis. Patients experiencing persistent pain after RCT should be evaluated for TMD.

**Key Results**: Nineteen patients who were eligible, met the pain criteria, and consented to be clinically evaluated, participated in the study. The mean age was 49 years and most (89%) were non-Hispanic, females (84%), and had dental insurance (89%). Approximately ½ of the teeth were in the maxilla and a majority (89%) were posterior teeth. A little over ¼ of patients reporting pain 6 months after RCT had solely odontogenic reason for this pain and almost ½ had a nonodontogenic reason. The remaining patients had either both odontogenic and nonodontogenic reasons or no pain diagnoses at the time of clinical examination. In ½ of the patients with an odontogenic diagnosis, the pain was related to pathosis in an adjacent tooth. The most common nonodontogenic reason was TMD.

**Applicability or Significance**: Dentists should have the necessary knowledge to differentiate between odontogenic and nonodontogenic diagnoses to adequately manage their patients.