

NTEA ENDO FAX

Compliments of North Texas Endodontic Assoc.

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CRACKING THE CRACKED TOOTH CODE

Unfortunately, the incidence of cracks in teeth seems to be increasing. People are living longer and keeping their teeth longer. As a result, patients are more likely to have complex restorative and endodontic procedures that remove tooth structure, leaving teeth more susceptible to cracks. People of all ages are also living more stressful lives, which can result in crack-inducing habits, such as cleanching and bruxism.

Classic Signs, Classic Confusion

Teeth with cracks tend to have **erractic pain on mastication, especially with release of biting pressure**. Sometimes there is **pain to temperature extremes**, especially cold. Generally, there is **no pain to percussion**, and **radiographs are inconclusive**. Often patients will complain of **long history of pain** which has been difficult to diagnose and of **treatment which has failed to relieve their symptoms**. These have been labeled "**classic signs**" of cracks. However, the variable combination of signs and symptoms makes diagnosis confusing.

Treatment Planning

Many factors can affect prognosis and each of these must be carefully considered before proceeding with treatment:

1. **Periodontal probing:**

Absence of a defect does **not** rule out the presence of a crack
Deep probing indicates an adverse prognosis

2. **Radiographic examination:**

Findings will depend on pulpal and periradicular status
Vertical or furcal bone loss may indicate a severe crack

3. **Pulp and periradicular tests should be performed:**

If pain to chewing is the only symptom, a tight-fitting band or temporary crown may be cemented to help confirm a cracked tooth diagnosis. If banding resolves pain to chewing, a full coverage restoration is indicated. If pain continues after banding, further evaluation of the extent of the crack and pulpal and periradicular status should be performed.
Any thermal hypersensitivity probably indicates that the crack extends near or into the pulp, and RCT will be necessary **prior** to restoring the tooth with a permanent crown. Staining the access cavity (with methylene blue dye) and **visualization with microscopic magnification and illumination** may help confirm the presence of a vertical or pulpal floor crack.

NOTE: If the crack extends the full width of the chamber floor and there is a deep periodontal defect, prognosis is generally very poor.

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Prognosis

1. In all cases of cracked tooth, the patient should be fully informed that the **prognosis is questionable at best**.
2. The long term prognosis is better when no crack is visible or the crack does not extend to the chamber floor and the tooth is rendered pain free by banding or the placement of temporary crown.
3. Patients should be advised, however, that crack may continue to progress and separate.
4. Placement of a full crown, while providing optimum protection for the tooth, does **not** guarantee success.

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