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ENDONEWS

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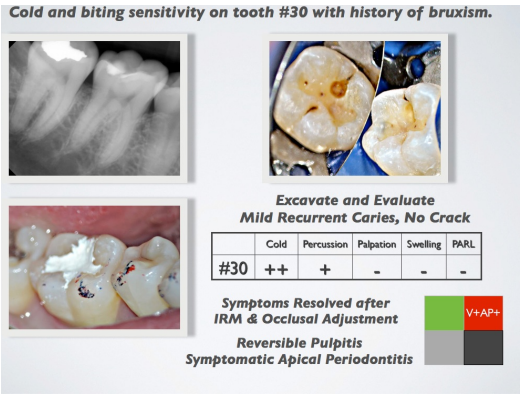
Full-Scale Endodontic Diagnostic Tests

Cold and percussion tests are excellent screening tests for pulp and periapical tissues. However, there are various clinical situations where a clinician needs to take more information to figure out the endodontic diagnosis. The followings are the recommended endodontic diagnostic test procedures that a clinician may deploy. When diagnostic tests are invasive or performed in anticipation of reproducing the symptoms, the patient should be fully informed and the consent should be obtained.

Hot Water Bath Test: Hot water with 140 F degree applied to a tooth that is isolated with rubber dam. This test usually reproduce the symptoms of the hyperalgesia from irreversible pulpitis in the offending tooth. Cold water should be readily available and immediately applied to relieve the symptoms from the hot water. The positive response to hot water bath test confirms the Symptomatic Irreversible Pulpitis.

Electrical Pulp Test (EPT): Negative response to EPT usually confirms the necrotic status of pulp tissue. EPT should be performed in dry condition to avoid false test result. Careful analysis of the patient response is necessary in anxious patients. EPT should not be performed on patients with cardiac pacemaker.

Test Cavity: A small opening into the enamel and dentinal layer can be made with #2 round bur without local anesthesia to check the pulp vitality. This is the last resort to test the pulp vitality in a confounding clinical situation.



Excavation: The existing restoration is excavated for inspection of recurrent caries, pulp exposure, or crack. Temporary restoration is placed for a provisional period to monitor the pulpal response. If the symptoms are resolved, final restoration is placed.

Selective Anesthetic Test: When pain is not localized, anesthesia is administered at the site of pain. If the pain disappears, the source of pain is located in the affected area where the injection was made. If the pain continue to exists, the source of pain is located elsewhere.

Tooth Slooth Test: When a fracture is suspected, a tooth slooth can be applied on the marginal ridge, cusps or fossa on the occlusal table of the suspected tooth and the patient bites down on the tooth slooth. Eliciting discomfort upon releasing the bite hints the presence of fracture.

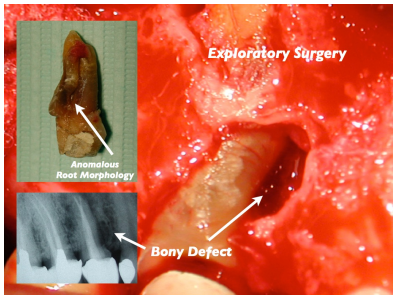
Transillumination: When fiberoptic light is illuminated, blockage of the light transmission usually indicates presence of fracture.

Visualization with Microscope: Visual inspection with high degree of magnification and illumination using a microscope can detect cracks.

Periodontal Probing: A deep and narrow pocket usually indicates the presence of vertical root fracture.

Tracing Sinus Tract: Using a gutta percha cone as a tracer, the source of the drainage can be traced.

Exploratory Surgery: Surgical flap to visualize the subgingival structure is helpful in making the final diagnosis in many puzzling clinical situations. The illustration below indicates the anatomical defect at the mesial aspect of the maxillary first bicuspid, contributing to the lateral periodontal lesion.



Radiographs: Periapical radiograph is an essential diagnostic tool to evaluate pariapical tissue. However, 2D radiograph has inherent limitations in revealing the true nature of the lesion. The use of 3D CBCT can enhance the diagnostic accuracy.

Interdisciplinary Consultation: Clinicians may seek consultations from various dental and medical experts when clinical issues remains puzzling. Consultation can be sought from oral surgeons, orofacial pain specialists, TMD specialists, internists, otolaryngologists or neurologists.

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