Tyson Curtis, DDS

Case Report:
Nonsurgical Root Canal Therapy #19

25 year old Hispanic female presented for evaluation and treatment of tooth #19

Subjective
Chief complaint: “I have a toothache in a lower left molar”

Medical History: The patient has no known drug allergies and is not taking any medications. ASA I

Dental History: The patient stated that 1 year ago, a fragment of a lower left molar came off while eating and then it started becoming painful 5 months ago. The pain is spontaneous and intermittent. Cold will make it worse and it occasionally keeps her up at night. The patient saw a dentist who told her she needed root canal therapy. As of now, the patient has not had a painful episode in 7 days.

Objective
Vital signs: BP=117/72; P=89

Extra-oral Exam: No swelling, asymmetry, or lymphadenopathy. TMJ evaluation WNL

Intra-oral Exam: No swelling or sinus tracts. Missing tooth #5. DO amalgam tooth #12. Pit and fissure decay teeth #18 and 31. DB portion of the crown of tooth #19 missing to the gingival level with decay present.
**Diagnostic Findings:**

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<th>Tooth</th>
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<th>Palpation</th>
<th>Probing</th>
<th>Mobility</th>
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**Radiographic Interpretation:** A large distal carious lesion exists on tooth #19. The mesial canal appears as though it comes to an abrupt stop at 2/3rds of the root. A widening of the PDL and lack of lamina dura is present at the apices of tooth #19. The mental foramen is seen mesial to the apex of tooth #20.

**Assessment**

#19: Irreversible pulpitis with asymptomatic apical periodontitis

**Plan**

Recommended NSRCT #19. Alternative treatment options were extraction or no treatment. She was informed of the risks involved with nonsurgical root canal therapy. The urgency of returning to her dentist to have a final restoration placed after endodontic treatment was explained to the patient. The patient was informed that the
prognosis for tooth #19 was good and she consented to having the treatment performed.

**Treatment**
9/17/10
Administered 36mg lidocaine with 18ug epinephrine via IA/buccal infiltration #19. Tooth was cold tested prior to placement of rubber dam isolation to confirm anesthesia. Rubber dam and clamp were placed, caries was removed, and the pulp chamber was accessed with a #4 round bur. The access preparation was refined with a #269 bur. Heme and multiple pulp stones were present in the chamber. The pulp stones were removed using a BUC-1 ultrasonic tip. MB, ML, DB, and DL canals were found. Coronal flaring was accomplished with #2-4 Gates Glidden drills and 50,40,30 orifice shapers. EAL indicated the following working lengths:

MB:20mm; reference point-MB cusp tip
ML:20mm; reference point-ML cusp tip
DB:20mm; reference point-DL cusp tip
DL:20mm; reference point-DL cusp tip

A working length film was taken. Canals were irrigated with 6% NaOCl and dried with paper points. Calcium hydroxide was placed in the canals and the tooth was temporized with cotton and IRM. Post-operative instructions were given to the patient to take 600mg ibuprofen every 4 to 6 hours as needed.

**Treatment**
9/27/10
The patient presented to clinic without any symptoms. She stated that she only needed to take 600mg of ibuprofen three times on the day of the last appointment. Testing of percussion, palpation,
probing, and mobility were all within normal limits on tooth #19. The new diagnosis for this tooth was previously initiated therapy with asymptomatic apical periodontitis. 36mg of lidocaine with 18ug epinephrine were administered via IA. Rubber dam isolation was placed and IRM temporary, cotton pellet, and calcium hydroxide were removed. Canals were instrumented up to a size 40.04 NiTi hand file with RC Prep. Canals were irrigated with 6% NaOCl between files. As time was limited, obturation was carried out on another appointment. Canals were dried with paper points and calcium hydroxide was placed. A cotton pellet was placed in the pulp chamber and the access was temporized with IRM. Rubber dam and clamp were removed. Post-operative instructions were the same as last appointment.

**Treatment**
10/11/10

The patient presented to clinic without symptoms and reported no post-operative discomfort after the last appointment. #19 PPPM-WNL. No change in diagnosis. Administered 36mg lidocaine with 18ug epinephrine via IA. Placed rubber dam isolation, removed temporary, cotton pellet, and calcium hydroxide. Confirmed final file size to working length. Final rinse was done with 17% EDTA followed by 6% NaOCl. Dried canals with paper points, placed 4 40.04 master gutta percha cones, and took a master cone film. Placed Kerr Sealer in canals followed by master cones and downpacked with Hot Tip. Canals were backfilled with Hot Shot in 2mm increments followed by condensation with pluggers. A check film was taken and a cotton pellet was placed. The tooth was temporized with Fuji II. Rubber dam and clamp were removed and the patient was given the recommendation to see her dentist within the next two weeks for a final restoration. She was told that she would be notified in the mail to make an appointment for a 6 month evaluation of #19.
Prognosis: Good