

# PERIAPICAL LESION WITH INTERNAL RESORPTION

*Arthur N.*

*In January 1993, Arthur came to our office*

*complaining of pain and swelling over his maxillary left lateral incisor (#10).*

*His dentist had recommended extracting the tooth and placing a fixed bridge,*

*but Arthur wanted a second opinion to see if it would be possible to save the tooth.*

Oral examination revealed a discolored maxillary left lateral incisor (#10) with a fistulous tract over the apex. Radiographic examination revealed a large periapical lesion and internal resorption almost penetrating the walls of the root canal.

I recommended that we attempt to heal the periapical lesion and stop the internal resorption by performing root canal therapy and treating the tooth with TempCanal, temporary calcium hydroxide canal treatment paste. Having a pH >12, TempCanal inactivates the osteoclastic cells.

The canal was opened from the palatal aspect using a #4 round bur, and the access cavity was made large enough to easily remove the coronal pulp tissue and negotiate the root canal. The pulp tissue was removed, and a diagnostic radiograph was taken at 21 mm (RN1). Note the periapical lesion and internal resorption. The canal was washed with sodium hypochlorite and opened to a #50 file.

The abscess was allowed to drain, and when the drainage was reduced to a minimum, Arthur was dismissed with only cotton in the access cavity to keep food out.

Arthur returned two days later. The canal was again filed and reamed and cleaned of all debris

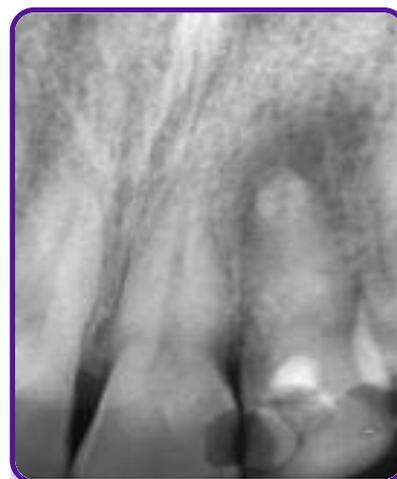
using sodium hypochlorite. Pulpdent TempCanal was placed into the canal, and the tooth was sealed with temporary cement.

This procedure was repeated the following week. Due to the extensive internal resorption, the decision was made not to obturate the canal until we were certain that the internal resorption had been checked.

The TempCanal dressing was changed once a month for the next four months. *Figure RN2*, taken after three months, shows the internally resorbed area filled with TempCanal. Note that periapical healing is beginning to occur.



**Figure RN1**  
Diagnostic radiograph showing internal resorption and periapical lesion. (January 1993)



**Figure RN2**  
Radiograph taken after three months shows internally resorbed area filled with TempCanal and periapical healing beginning to occur. (April 1993)

At the end of ten months, we could see that the internal resorption was under control. The TempCanal dressing was removed and the canal was obturated with Pulpdent Root Canal Sealer using the Pressure Syringe technique. The tooth was sealed with a temporary restoration (RN3).

Arthur did not return to have his tooth restored until August 1994. Using a long shank #4 round bur and a peeso reamer, the root canal sealer was cut back to the base of the internally resorbed area. All sealer was removed from the sidewalls of the canal. Because Pulpdent Root Canal Sealer contains eugenol and composites will not set in the presence of eugenol, the sidewalls of the canal were treated with a chelating agent, washed with sodium hypochlorite and rinsed thoroughly with water.

The walls of the canal were then etched, and in anticipation of preparing the tooth to receive a crown, the tooth was built up using DenTASTIC adhesive primer and HardCore dual cure core material (RN4). A CR Syringe (Centrix, Inc.) with a long needle was helpful with the placement of HardCore into the root canal and internally resorbed area.

*Although we completed this phase of the restoration in August 1994, when I saw Arthur four years later (RN5), he still had not had a crown made for this tooth. As he said to me, "I don't think it looks that bad."*



Figure RN3  
Shows canal and internally resorbed area obturated with Pulpdent Root Canal Sealer. (October 1993)



Figure RN4  
Radiograph taken twenty months following treatment with TempCanal shows internal resorption controlled and periapical lesion healed. Note lamina dura. Part of the root canal sealer has been removed and the tooth has been reinforced with HardCore core build up material using DenTASTIC as the adhesive primer. (August 1994)



Figure RN5  
Radiograph taken in July 1998, 5 1/2 years following initial treatment, shows internal resorption still under control and the periapical lesion completely healed. (July 1998)