

## Pulpectomy

### PARTIAL PULPECTOMY:

A partial pulpectomy may be performed on primary teeth when coronal pulp tissue and the tissue entering the pulp canals are vital but show clinical evidence of hyperemia. The tooth may or may not have a history of painful pulpitis, but the contents of the root canals should not show evidence of necrosis (suppuration).

In addition, there should be no radiographic evidence of a thickened periodontal ligament or of radicular disease. If any of these conditions is present, a complete pulpectomy or an extraction should be performed.

### The procedure involves:

1. Removal of the coronal pulp as described for the pulpotomy technique. The pulp filaments from the root canals are removed with a fine barbed broach; considerable hemorrhage will occur at this point. A Hedstrom file will be helpful in the removal of remnants of the pulp tissue, The file removes tissue only as it is withdrawn and penetrates readily with a minimum of resistance. Care should be taken to avoid penetrating the apex of the tooth.



2. After the pulp tissue has been removed from the canals, a syringe is used to irrigate them with 3% hydrogen peroxide followed by sodium hypochlorite.
3. The canals should then be dried with sterile paper points.
4. When hemorrhaging is controlled and the canals remain dry, a thin mix of unreinforced zinc oxide-eugenol paste may be prepared and paper points covered with the material are used to coat the root canal walls.
5. A thick mix of the treatment paste should then be prepared, rolled into a point, and carried into the canal.
6. Root canal pluggers may be used to condense the filling material into the canals. An x-ray film may be necessary to allow evaluation of the success in filling the canals. The tooth should be restored with full coverage.

Another popular root canal filling material for primary teeth is Vitapex, a product that has received many favorable anecdotal reports about its successful use in infected primary teeth. The primary components of Vitapex are calcium hydroxide and iodoform.

### **NONVITAL PULP THERAPY**

#### **COMPLETE PULPECTOMY:**

It is unwise to maintain untreated infected primary teeth in the mouth. They may be opened for drainage and often remain asymptomatic for an indefinite period.

### The procedure involves:

1. Local anesthesia injection
2. Use rubber dam.
3. The roof of the pulp chamber should be removed to gain access to the root canals as described previously in the pulpotomy technique.
4. The contents of the pulp chamber and all debris from the occlusal third of the canals should be removed, with care taken to avoid forcing any of the infected contents through the apical foramen.
5. A pellet moistened with camphorated monochlorophenol (CMCP) or a 1:5 concentration of Buckley's formocresol, with excess moisture blotted, should be placed in the pulp chamber.
6. The chamber may be sealed with zinc oxide-eugenol.
7. At the second appointment, several days later, the tooth should be isolated with a rubber dam and the treatment pellet removed. If the tooth has remained asymptomatic during the interval, the remaining contents of the canals should be removed using the technique described for the partial pulpectomy. The apex of each root should be penetrated slightly with the smallest file.
8. A treatment pellet should again be placed in the pulp chamber and the seal completed with zinc oxide-eugenol. After another few days the

treatment pellet should be removed. If the tooth has remained asymptomatic, the canals may be prepared and filled as described for the partial pulpectomy.

9. If the tooth has been painful and there is evidence of moisture in the canals when the treatment pellet is removed, the canals should again be mechanically cleansed and the treatment repeated.

Currently, pulpectomies in primary teeth are commonly completed in a single appointment. If the tooth has painful necrosis with purulence in the canals, however, completing the pulpectomy procedure over two or three visits should improve the likelihood of success.