

Management of a Periapical Abscess in Tooth 46 with Six Root Canals

A 33-year-old female presented with pain in the lower right back tooth region since 1 month.

Clinical examination revealed a deep carious lesion in relation to 46 associated with tenderness on percussion. An intraoral periapical radiograph showed an ill-defined periapical radiolucency associated with the mesial root of tooth 46, suggestive of a periapical abscess.

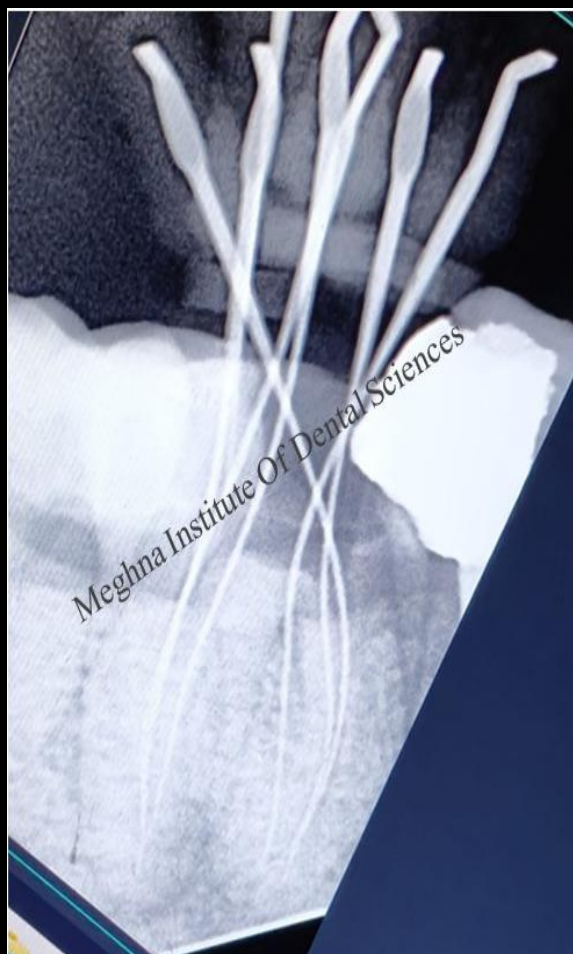
A diagnosis of chronic periapical abscess was made. Based on the clinical and radiographic findings, the treatment plan consisted of nonsurgical root canal treatment (RCT) for tooth 46 to eliminate the infection, preserve the tooth, and promote healing of the periapical tissues.



Pre-operative radiograph of tooth 46

After administration of local anesthesia, access cavity preparation was performed. Careful exploration of the pulp chamber floor revealed the presence of six root canals (three mesial and three distal canals).

Working length was determined using #10 K-file file and confirmed radiographically.



Working length determination irt 46

Cleaning and shaping were carried out using rotary nickel-titanium instruments up to size 20, 0.06 taper (20/.06) with copious irrigation using 3% sodium hypochlorite, saline and 17% EDTA. Calcium hydroxide and double antibiotic paste were placed as intracanal medicaments..



Master cone radiograph of tooth 46

At the subsequent visit, the patient was asymptomatic, and the canals were irrigated, dried, and obturated using gutta-percha (20/.06) and a ZOE sealer using the single cone obturation technique. The tooth was restored with a permanent coronal restoration to ensure an adequate coronal seal.



Obturation irt 46