How will you solve this case?

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Dr. Beena Rani Goel

Case history

A 52 year old male patient reported with the complaint of food lodgement between mandibular right first and second molars. There was mobility associated with first molar. He gave history of recurrent swellings on the buccal vestibule of 46. The root canal treatment and full crown were done on that tooth a few years back by another dentist. Clinical examination revealed a large secondary carious lesion cervical to the full crown on the distal side of 46. It had third degree mobility, with deep periodontal pocket on the distal side. 47 had large mesio-occlusal caries with slight tenderness, but it was not mobile.

Radiographic evaluation

A large radiolucency involving the area between the roots of 46 and the apical half of mesial root on its mesial side was seen on the radiograph. There was periapical radiolucency associated with both the roots of 47 (Fig 1).

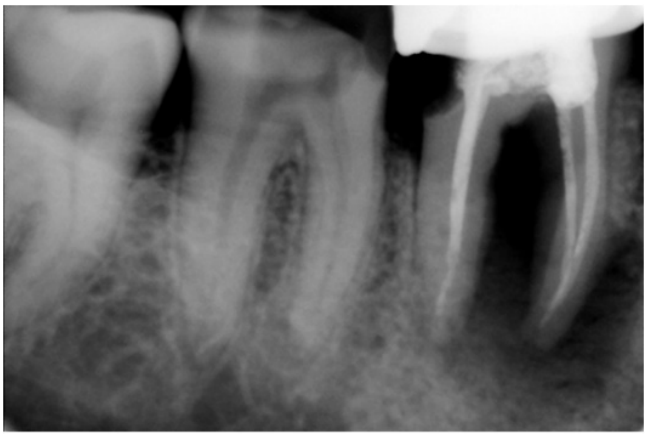

Fig. 1. Pre - operative IOPA of 46,47.

The radiographic findings, coupled with third degree mobility of 46 dictated a poor prognosis and it was decided for extraction. The unaddressed working width of the mesial canal was visible in the radiograph. Also, the buckling of the gutta percha in the distal root of 46 pointed to the same fact.

47 was diagnosed to be a chronic apical periodontitis case and planned for root canal treatment.

Treatment procedure

Access for 47 was gained under local anesthesia and working length determined with Root ZX. Instrumentation was completed with LightSpeed LSX. The final apical size of the distal canal was 80, mesio buccal and mesiolingual canals had the same exit and the final apical size was 50. EndoVac irrigation was done and obturation done by lateral condensation (Fig 2).

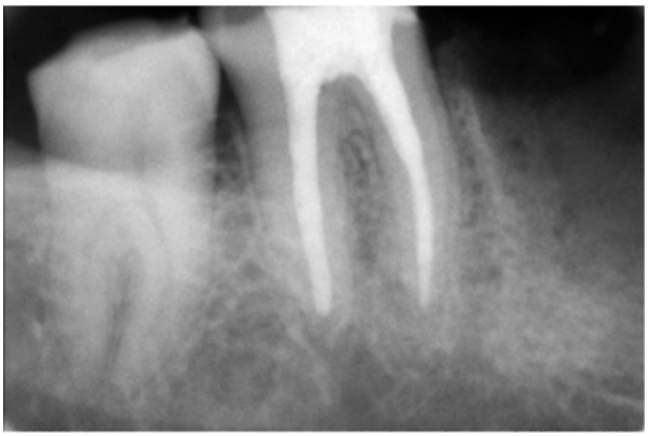

Fig. 2. Post operative IOPA

Patient Review

The patient was comfortable after the treatment and he didn't have to take any analgesic.

Why I chose LSX ?

Here, the patient was already losing his first molar because of the apical and coronal leakage. It was all the more important to do biologically optimal preparation of the canals of 47. As can be seen, they were size 80 and 50, which wouldn't have been possible with any other instrument.