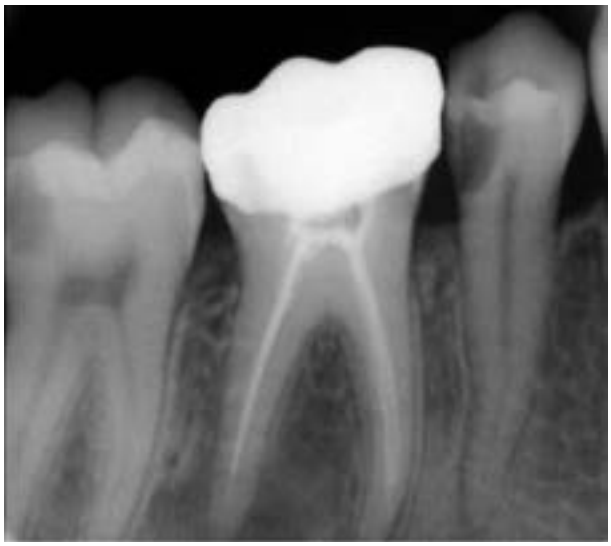
How Will You Solve This Case?

Beena Rani Goel, MDS, FIARE(USA). She is the founder of the Steve Senia Rotary Endodontics Training Center located in Belgaum, India, as well as a President of the International Academy for Rotary Endodontics which offers a fellowship to raise the bar for rotary endodontics. She maintains a private practice in Belgaum, and conducts regular training programs to promote quality Endodontics.

Dr. *Beena Rani Goel*

Case history :

A 27 year old female patient came with the complaint of pain since two days, in relation to the mandibular right second premolar, which was severe at night. The tooth was sensitive to cold, heat and there was pain on chewing. On examination, there was deep distal caries on 45, which was painful to probing. The 46 had a full crown and it was root canal treated according to the patient, by another Dentist about a year back.



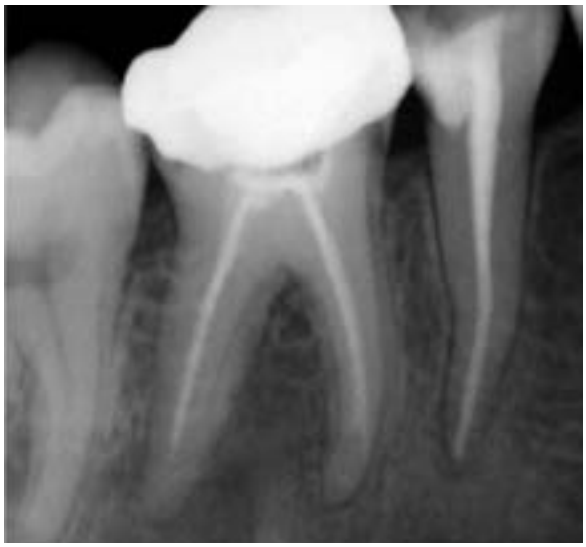
Radiographic evaluation :

The radiograph revealed the carious lesion on 45 close to the pulp and a widening of the apical periodontal space (Fig 1). The canal showed a curvature at the beginning of apical third. 46 showed root canal obturation and periapical radiolucency.

The diagnosis was acute pulpitis with apical periodontitis of 45 and a failed RCT of 46. Since the current problem was with 45, its root canal treatment was planned and patient was advised to get the re-RCT of 46 done later.

Treatment procedure

Access was gained under local anesthesia and the pulp was found hyperaemic. Working length was determined with **Root ZX** . Instrumentation was completed with **LightSpeed LSX**. The final apical



size was 55. Same size gutta percha was not going to the full working length, giving an indication that there was a curvature of the canal in the buccolingual direction too (not visible in the radiograph). So the obturation was done with **#55 SimpliFill** and the remaining space filled with another #55 gutta percha and lateral condensation (Fig 2).

Patient Review :

The patient had to take one analgesic on the day of treatment and thereafter she was free of pain.

Why I chose LSX ?

For the root canal instrument to stay within the canal and address the working width, it should have extreme flexibility. LSX being a non tapered instrument, it could give biologically optimal apical reparation of #55 in this curved canal. The adjacent molar RCT shows short WL, straightened canals and most probably, unaddressed working width and a missed canal. Not addressing the working width is leading to an increase in the incidence of re-RCTs and re-re RCTs in the present time.