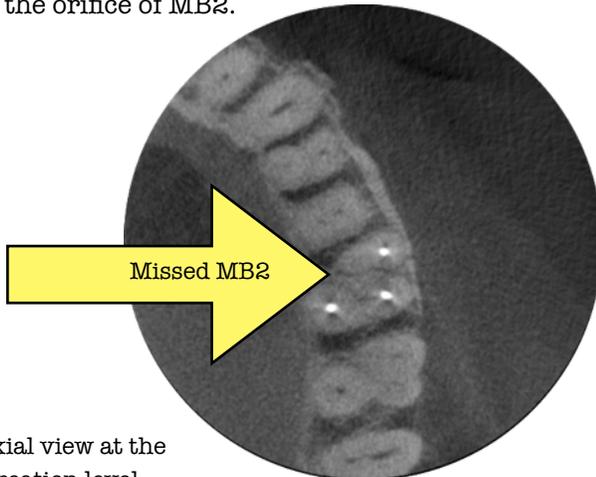


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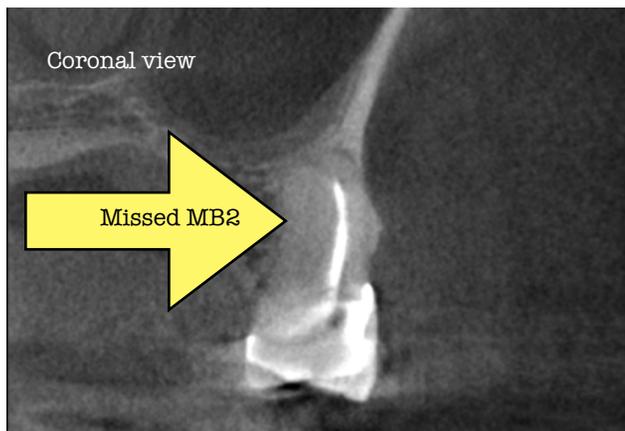
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## Management of MB2 in Maxillary Molars using 3D Cone Beam CT (CBCT) Scan

The management of the second MB canal (MB2) in maxillary molars can be challenging. However, the use of 3D CBCT imaging makes it easy to identify the presence and the shape of MB2 canal. The incidence of MB2 canal in maxillary molars is about 55%. In many cases, the MB2 canal has its own separate apical foramen. (Cleghorn, JEndo 2006) In 3D CBCT scan, the axial view offers a unique information on the orifice of MB2.



And the coronal view allows to follow the course of MB2 to the apical foramen. 3D analysis of MB root helps to deliver more predictable endodontic treatment for maxillary molars.



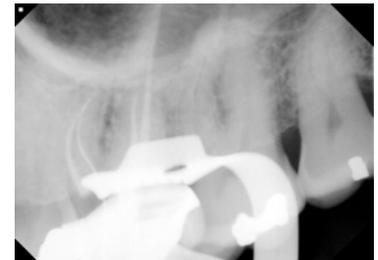
## Missed MB2 - Case Report

The patient presented with sensitivity to touch and certain biting pressure after RCT had been completed 6 months ago. There was periapical radiolucency at the MB apex.



PreOp Radiograph

The axial view of the CBCT scan demonstrated the elliptically shaped cross section of MB root at the furcation level which strongly suggests the presence of the 2nd MB canal. Also, the coronal view indicated the root canal filling in the MB root was off to the buccal area and an additional apex was present at the palatal side of the MB root apex. Based on these 3D analyses, non surgical retreatment was adopted as the best treatment plan. Endodontic access was made through the crown. MB2 canal was located and negotiated by using the operating dental microscope.



Working Length Radiograph with a file in MB2 canal

The MB2 canal was cleaned and shaped.  $\text{Ca}(\text{OH})_2$  was placed as the intracanal medicament. The root canal space was obturated with gutta percha and sealer. The endodontic access was sealed with Glass Ionomer cement. The patient was referred back to the general dentist for the final resotation.



PostOp Radiograph