

> 4 ON THE FLOOR  
FOR A MAX 7

APR  
2014

In comparison to maxillary first molars the second molars tend to have shorter and straighter roots that are more likely to be fused. Also, the fourth canal is less prevalent in second molars. Recently I treated a 17 that broke all the rules. Not only did this tooth have four roots, the roots were long, curved, and definitely not fused. Guidelines do not apply to atypical teeth such as this one.

The MB2 root was palatally displaced and its orifice covered by a mass of secondary dentine. Modification of the access preparation, as well as following anatomical clues on the chamber walls and floor were necessary to locate the MB2 orifice. The canals were also challenging in that they were long, calcified, and curved. To safely negotiate such canals, NiTi hand and 02 rotary files were used to prepare the apical portions. The middle and coronal sections of the canals were prepared with more traditional methods (i.e. Gates Glidden drills and 04 rotary files).

*Think segmentation of preparation when canals are long, calcified, and curved. Otherwise you may be facing transportation and separation.*

It is risky to have a single rotary file not only negotiate a long and curvy canal but to also simultaneously prepare its walls. Instead, segment the preparation into three distinct components –apical, middle, and coronal. Different instruments and techniques are necessary to address the unique preparation goals for each section of a canal.

**CORONAL SECTION:** It is important to attain straight line access; some transportation is acceptable. Instrument fracture is not likely to occur and is usually fixable non-surgically. It is the least technique sensitive section.

**APICAL SECTION:** The goal is to maintain patency without any transportation. This is the most critical section and requires more time and special attention. An iatrogenic error here is no easy fix and endodontic microsurgery may be necessary for ideal healing to occur.

**MIDDLE SECTION:** Avoid a strip perforation and do not block access to the apical third are critical here. To be safe, do not over work this section.

Segmenting the preparation of difficult canals into thirds is logical and helps reduce the likelihood of file fracture, stress, and a bad day. When in doubt refer it out!

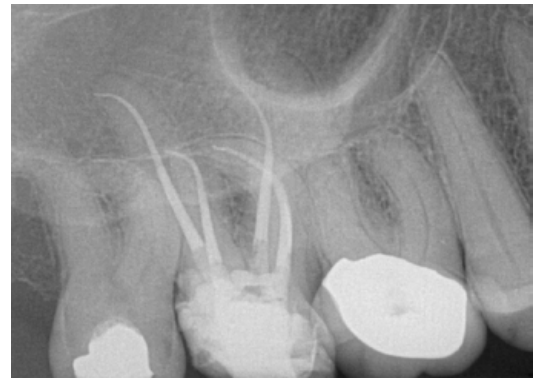
Regards,



Dr. Joel N. Fransen  
BSc(OT), DMD, FRCD(C)  
Certified Specialist in Endodontics



PRE-OP



POST-OP



**Richmond Endodontic Centre**  
Dr. Joel N. Fransen

**110-11300 No.5 Rd**  
Richmond, BC V7A 5J7  
office@endodonticcentre.com  
T 604.274.3499  
F 604.274.3477

**Office Hours**

8am to 5pm - Monday to Friday  
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