



# Newsletter

## PRAIRIE ENDODONTICS

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Happy Spring!!

We hope you enjoy issue n.2 of our newsletter. Please feel free to reach out and ask any questions that may arise.

Cheers and happy Easter!

*Rodrigo, Simona and Mike*

Prairie Endodontics - Winnipeg - MB

### Case Report

Managing Horizontal  
Root Fractures:  
Sometimes less is  
more...

### Evidence-Based Endodontics

Contemporary  
Management of Horizontal  
Root Fractures to the  
Permanent Dentition:  
Diagnosis—Radiologic  
Assessment to Include  
Cone-Beam Computed  
Tomography

### Biomaterials

Bioceramic  
Endodontic Sealers



## Horizontal Root Fracture - Sometimes less is more.



Preoperative radiograph  
Cold test (+) short



3 month follow-up  
Cold test (+) short



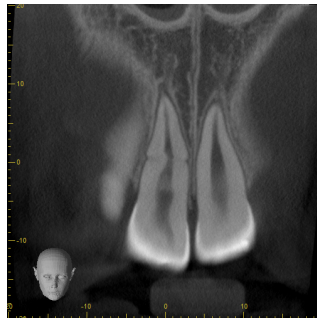
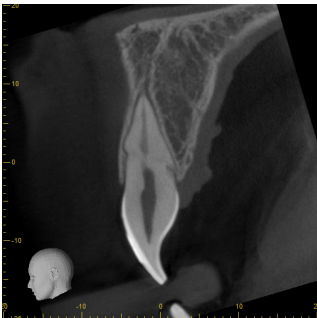
6 month follow-up  
Cold test (+) short  
Notice the growth of the root.



9 month follow-up  
Cold test (+) short



18 month follow-up  
Cold test (+) short



24 month follow-up CBCT scan  
Cold test (+) short. The horizontal fracture has healed completely

We would like to acknowledge **Dr. Mel McManus (Toddlers to teens)** for the emergency management of this case and prompt referral to our office.



# Contemporary Management of Horizontal Root Fractures to the Permanent Dentition: Diagnosis—Radiologic Assessment to Include Cone-Beam Computed Tomography

Authors: [May, Jeremy J.](#); [Cohenca, Nestor](#); [Peters, Ove A.](#)

## Abstract

Historically, obtaining several periapical radiographs has been recommended to diagnose horizontal root fractures. Assessing the 3-dimensional orientation of a fracture is correlated to treatment and outcome. However, conventional radiography yields only limited information for accurate diagnosis. Cone-beam computed tomography (CBCT) is a relatively new and useful technology, which provides an auxiliary imaging modality to supplement conventional radiography for evaluating horizontal root fractures. Despite the increasing application of this technology as well as a growing body of evidence supporting its value in diagnosing horizontal root fractures, there are no specific guidelines for its use. This article aimed to provide such preliminary guidelines for cases of suspected horizontal root fracture as a result of trauma. From a database search it was concluded that CBCT is most useful in cases in which conventional radiography yields inconclusive results or shows a fracture in the middle third of a root. In such cases CBCT may rule out false negatives, ie, a suspected root fracture not visualized with conventional radiography. For a root fracture in the middle third, CBCT may rule out or confirm an oblique course of fracture involving the cervical third in the labiolingual dimension. Although there are considerable advantages when CBCT is included in the assessment of horizontal root fracture and its possible sequelae, more experimental and clinical studies are warranted to determine the exact impact on outcomes.



In 2007, a Canadian research and product development company (Innovative BioCeramix, Inc., Vancouver) developed a pre-mixed calcium silicate-based injectable sealer called iRoot® SP. The chemical composition is calcium silicates, zirconium oxide, tantalum oxide, calcium phosphate monobasic and fillers. These sealers have excellent mechanical and biological properties as well as great handling properties. They are hydrophilic, insoluble, radiopaque, aluminium-free and have a high pH and excellent sealability properties. Below you will find a few different brands of Bioceramic sealers.

