

> HORIZONTAL ROOT FRACTURES

NOV
2010

Statistically, one-third of the population will experience a traumatic dental injury during their lifetime. A successful outcome depends on the severity of the injury, an appropriate diagnosis, and timely treatment.

Since horizontal fractures are often oblique, a high-angle radiograph (see the left-most radiograph) will best allow visualisation of the fracture. An occlusal arch and three periapical radiographs (straight, mesial and distal angles) are also necessary to determine the extent of the injury to the surrounding structures and adjacent teeth. Frontal and occlusal photographs are useful for determining tooth displacement and initial colour.

A baseline endodontic evaluation of all anterior teeth is necessary to identify which have been injured. This includes percussion, palpation, mobility, and sensibility (cold) tests, EPT, and periodontal probing. An accurate diagnosis relies on a thorough history of the incident in conjunction with clinical, radiographic, and photographic evaluations.

The diagnosis is crucial, as the extent and severity of the injury will govern the treatment protocol. In the case of extrusion or avulsion of the coronal segment; reposition and non-rigidly splint the tooth with an orthodontic wire and composite. If the tooth has already been repositioned, ensure it is correctly positioned and splinted as soon as possible. It is possible to surgically reposition a tooth up to thirty-six hours post-injury. After this time, splint the tooth in its current position and monitor for at least four weeks. A 0.1% chlorhexidine rinse and NSAIDs are recommended.

Alone, an initial lack of cold sensitivity is not enough to justify endodontic treatment. The pulp damage may be transient and the coronal portion has the potential to revascularise. The radiographs and photographs above are of such a case. The pulp of the coronal segment recovered with a hard tissue barrier and a new PDL. In this case, only a non-rigid splint and an enameloplasty was provided and the tooth remains stable with a healthy pulp.

After a horizontal root fracture as with other traumatic dental injuries, it is important to monitor the pulp and periapical status closely for several weeks and then annually for a number of years. It is possible that an apparent recovery may be false. Such teeth appear to initially recover from a traumatic injury only to develop pain to palpation or percussion several months to years later. In the absence of symptoms, radiographic pathosis, discolouration of the crown, and increased mobility may be observed. If the coronal segment becomes infected, non-surgical endodontic treatment with MTA is necessary. The apical portion typically remains vital and does not require root canal treatment.

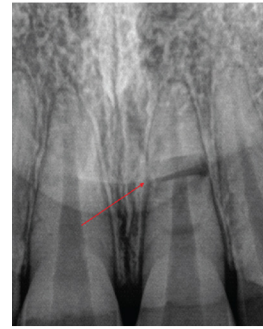
Regards,



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Lest We Forget



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