

October 2018 Case Report by Dr. Nicole Shinbori

In January 2017, a 10-year-old male presented to our office after an avulsion trauma of #8 and #9. His dad had immediately placed his teeth back into the sockets after the trauma and took his son to see his general dentist. The general dentist placed a bonded wire splint, placed him on an antibiotic, and referred him to our office. I saw him 20 days after trauma for evaluation and localized CBCT scan. In 2015, the AAE and AAOMR issued a revised joint position statement on the use of CBCT in Endodontics and it was recommended for use in traumatic injuries:

“Traumatic Injuries Recommendation 11: Limited FOV CBCT should be considered the imaging modality of choice for diagnosis and management of limited dento-alveolar trauma, root fractures, luxation, and/or displacement of teeth and localized alveolar fractures, in the absence of other maxillofacial or soft tissue injury that may require other advanced imaging modalities.”

Radiographic exam (image A and B) revealed horizontal root fracture of #8 with a separated apical root segment. Clinically, #8 had Class II mobility. #9 appeared intact but clinically had a buccal swelling with a 6mm buccal perio probing that had purulent drainage. Both #8 and #9 had no response to cold. I recommended opening and medicating #8 and #9 with long term calcium hydroxide and keeping the splint on as we monitored the healing and mobility of the teeth. I discussed the questionable long term prognosis of both teeth with his parents but explained that due to the patient's young age, tooth retention for as long as possible was key.

I saw the patient back 2 days later for treatment. I opened both #8 and #9, medicated them with calcium hydroxide with iodoform paste, and placed a temporary glass ionomer filling (image C). Only the coronal portion of #8 was able to be cleaned and medicated. The hope was that the apical root segment would possibly remain vital and intact and no treatment would be needed on it.

Patient returned 6 weeks later, buccal swelling was gone on #9 and perio probings were 2mm. #8 had a draining buccal sinus tract and still had Class II mobility. #9 was obturated and a permanent composite access restoration was placed. #8 was re-medicated with calcium hydroxide (image D) for 2 more months until the gingiva appeared healed and the tooth felt stable. #8 was obturated with bioceramic putty in the coronal root and a composite access restoration was placed (image E). Patient was scheduled for a 3 month follow up.

Unfortunately, the patient returned 4 months later and mom noted that the sinus tract on #8 had come back a week prior. #9 tested normal and perio probings WNL. I discussed surgery with mom and dad and recommended a gingival flap to remove the separated root fragment of #8 and remove the granulation tissue around the coronal root. Patient disappeared for a year and finally presented back to our office in July 2018. Surgery was rediscussed and a new CBCT scan was taken (image F). Mom consented to surgery and surgery was performed 2 months ago, about 1.5 years after trauma. The apical root segment was removed, apical portion of coronal segment was retroprepped and retrofilled with bioceramic putty and a horizontal fracture of the coronal segment was located and removed as well (image G). Bone grafting material was

placed in the osteotomy. Patient did great and was seen 1 week later and again more recently. His gingival tissue is healing nicely and #8 is becoming more stable. We are hopeful that the tissue and bone will heal and that the area will be more ideal for an implant if the coronal segment is retained. We have another follow up in 1 month to see if we can finally remove the splint.

Not many endodontists see pediatric patients under age 16. Some of these patients are honestly the easiest and most fun to work on! I enjoy seeing pediatric patients even though emotionally it is difficult to know that the trauma they have undergone usually has long term effects that they will have to deal with throughout their lifetime. I appreciate pediatric referrals and am happy to help these patients get out of pain and retain their dentition for as long as possible.

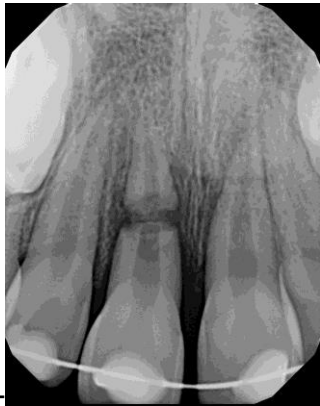


image A-

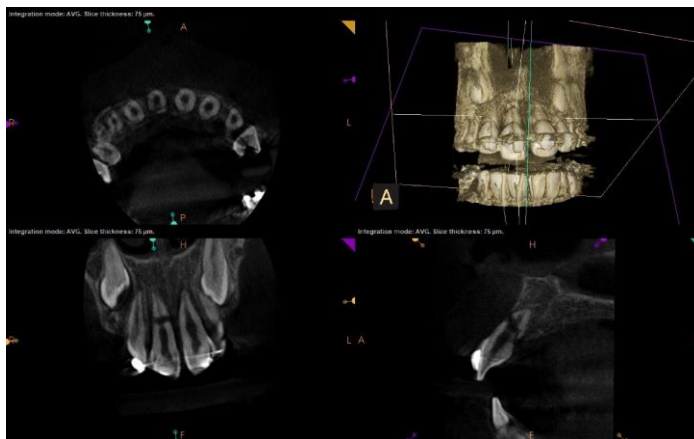


image B-



image C-



image D-



image E-



image F-

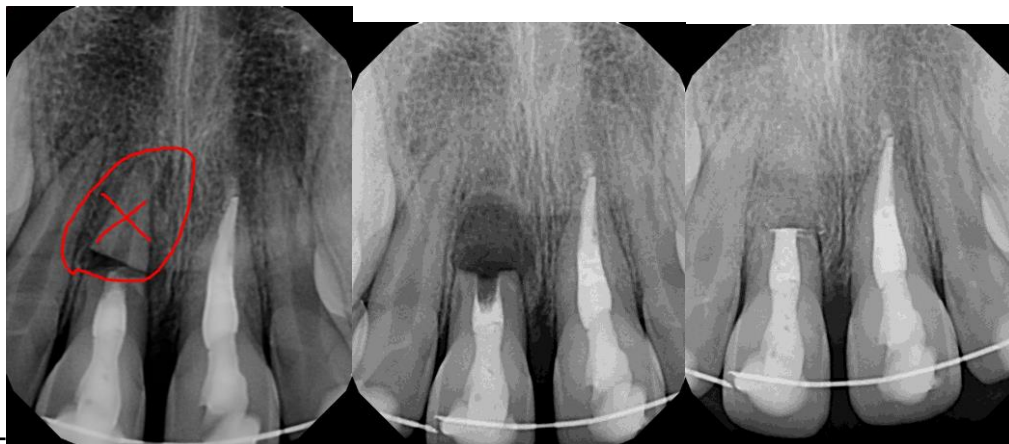


image G-