

CASE REPORT

APEXOGENESIS AND REVASCULARIZATION TREATMENT OF TWO TRAUMATIZED MAXILLARY CENTRAL INCISORS WITH COMPLICATED CROWN FRACTURE: A CASE REPORT

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Traumatic injuries to an immature permanent tooth may result in cessation of dentin deposition and root maturation. Endodontic treatment is often complicated in premature tooth with an uncertain prognosis. This article describes successful treatment of two traumatized maxillary central incisors with complicated crown fracture 3 days after trauma. The radiographic examination showed immature roots in maxillary central incisors of a 9-year-old boy without any radiolucent lesion. Apexogenesis was performed for both upper central incisors. Follow up will be done till 18-months. Both Clinical and radio-graphic follow-up will be assessed for inflammatory symptoms and closure of apex, respectively.

Under local anesthesia with 2% Lidocaine and 1 : 800,000 epinephrine (Xylocaine 2%, Neon Labs) and proper isolation, an access cavity was prepared for the upper right and left central incisors. Coronal pulp tissues were removed by using a high-speed sterile long shank round diamond bur under copious water spray. The area was rinsed with normal saline solution and hemostasis was achieved by a cotton pellet moistened with 5% sodium hypochlorite (NaOCl). White Mineral Trioxide Aggregates (MTA angelus) powder was mixed with distilled water according to manufacturer’s instructions and placed without pressure over the exposed clot-free pulpal wound. The material was gently patted down with a moist cotton pellet. Then a moistened cotton pellet was placed over MTA and the tooth was temporarily filled with Cavit (Asia Chemi Teb Co., Tehran, Iran). One day later, the teeth were restored permanently with composite resin (Henry Schein Flowable composite, USA).

After follow up 4 weeks closure of apex was seen. The patient had no symptoms of pain or inflammation. Patient is further asked to come for one more follow up.

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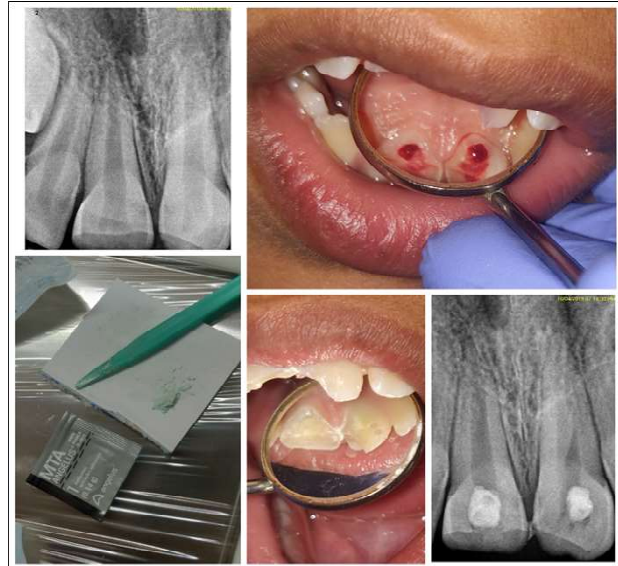


Fig 1: Metapex Obturation done on 07/10/2019



Fig 2: Follow up 02/11/19

DISCUSSION

Healthy pulp is an utmost requirement for a successful vital pulp therapy.^{1,2} young teeth have high chance of rehabilitation if treatment is provided. Loss of pulp is found to have direct correlation with time lost after trauma, without treatment. If there is loss of time between trauma and treatment, complete removal of pulp must be ensured.³

CONCLUSIONS

The author believes that revascularization is an appropriate choice, especially in young patients. Preservation of pulp accelerates the root formation and hence ensures a successful apical seal. However, till

the date clinicians have used different treatment modalities with varied amount of success and hence further trials are needed to reach specific treatment approach.

REFERENCES

1. **Tronstad L, Mjör IA.** Capping of the inflamed pulp. *Oral Surg Oral Med Oral Pathol* 1972;34:477-485.
2. **Swift EJ Jr, Trope M.** Treatment options for the exposed vital pulp. *Pract Periodontic Aesthet Dent* 1999;11:735-739.
3. **Trope M. Chapter 36,** Endodontic considerations in dental trauma. In: Ingle JI, Bakland LK, Baumgartner JC. *Ingle's Endodontics*. 6th ed. Hamilton: BC Decker Inc; 2008. p1330-1357.