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CASE STUDY

PERIO-ENDO INTERACTIONS: MANAGEMENT OF TRAUMATIZED ANTERIOR TEETH

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ABSTRACT

Various reasons can be attributed to trauma to anterior teeth. An accurate diagnosis and treatment plan ensures their successful management. Diagnosis and treatment planning can prove to be troublesome even for experienced practitioners owing to the various luxation and fracture types. The International Association of Dental Traumatology has given guidelines which offer maximum success in management of traumatized teeth. Here is a case report discussing the management of atraumatizedanteriortooth.

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INTRODUCTION

Anterior teeth trauma has social and psychological effect on the patients, which makes their management needing immediate attention (Hamilton *et al*., 1997).Various specialists such as the oral and maxillofacial surgeons, pediatric dentists, endodontists, orthodontists, prosthodontists and periodontists are involved in the management of traumatized teeth (Andreasen *et al*., 2012). Division of dental traumainto nine fracture types and six luxation types and combinations of these two, leads to 54 combinations, with different healing scenarios each for primary and permanent teeth (Andreasen *et al*., 2009). This can lead to confusion in the treatment planning of traumatized anterior teeth. This article presents a case report and also aims to review the management of traumatized anterior teeth

Management of Traumatized Anterior teeth

The various classification systems available for dental trauma were summarized by Pagadala *et al*. (2015). Dental trauma was classified by The World Health Organization in its application of the International classification of Disease to Dentistry and Stomatology (Andreasen and Andreasen, 1994). Based on this classification, the International association of Dental Traumatology (http://www.iadt-dentaltrauma.org) and the American of Pediatric Dentistry (Guideline on management of acute dental trauma, 2005) gives recommendations for management and follow-up examinations for injuries. Crown fractures involving the pulp are called complicated crown fractures, and the ones that do not involve pulp areuncomplicated fractures. Emergency treatment is necessary when there is exposure of the pulp, to maintain its health (Moule and Moule, 2007). An internet-based knowledge and guidelines are provided by The Dental Trauma Guide, which consists of various treatment cases and long term follow up. It can be accessed on the internet using the address http://www.dentaltrauma guide.org (Andreasen *et al*., 2012). Luxation diagnosis and the crown or crown-root fracture are used to identify the diagnostic pathway. The consequent treatment plan can be decided with follow up protocol, based on the pathway. Figure 1 shows the dental trauma guide showing the trauma pathfinder (Andreasen *et al*., 2012). Based on the recommendations, the chances of a favorable outcome are maximized.

Case Report

A 12 year old male patient was referred for the management of fractured front tooth. The patient gave a history of a fall and trauma in relation to anterior teeth, and presented with an Ellis and Davey's class III fracture in relation to 11. Based on the IADT guidelines, a treatment plan was decided. Firstly, the coronal fragment was removed and since the pulp was exposed and apices were closed, a root canal therapy was done.

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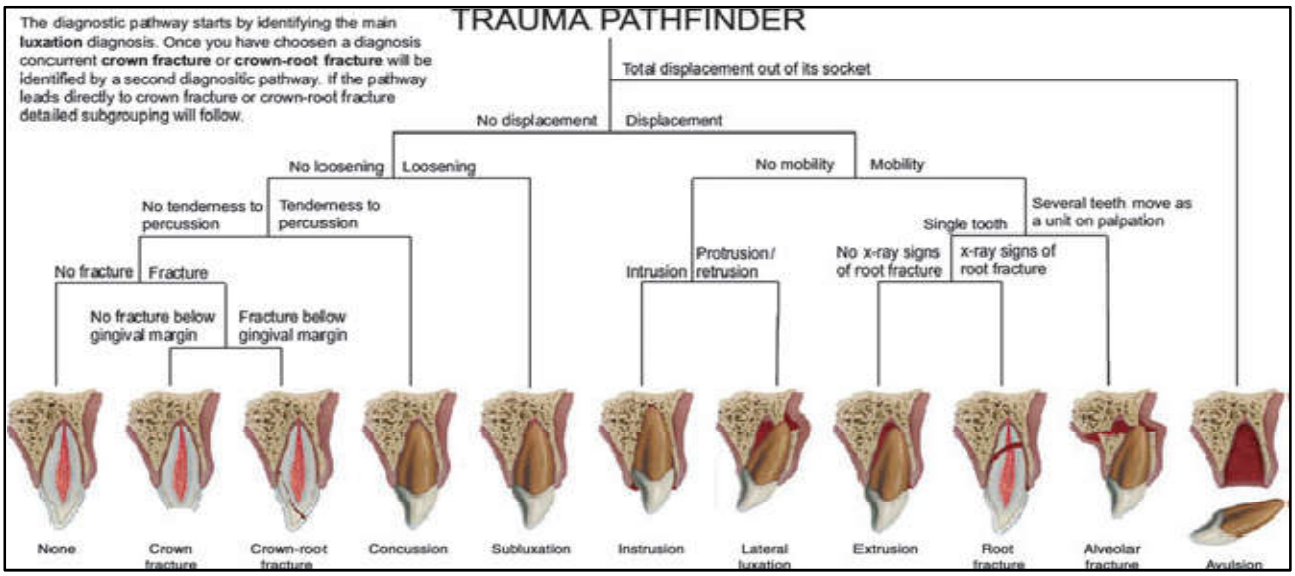
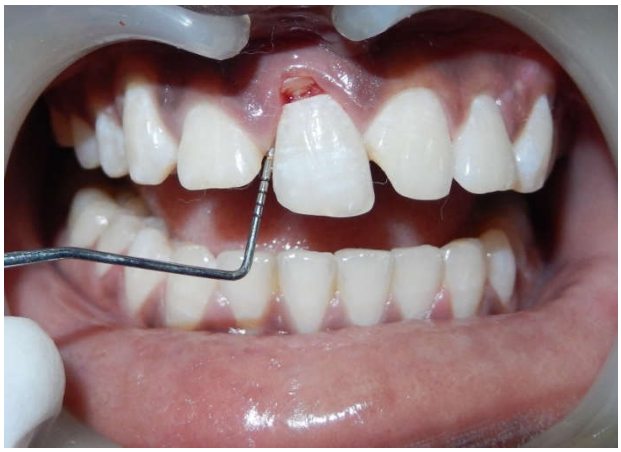


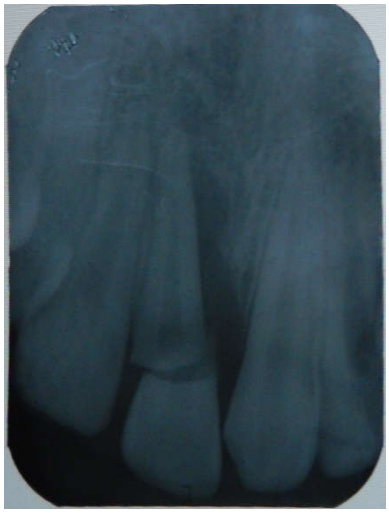
Figure 1. Dental Trauma Guide showing Trauma Pathfinder (Andreasen *et al*., 2012)

A vertical bone defect was found in the patient in relation to 11 two weeks following the treatment. A regenerative flap surgery was planned. The root was surgically repositioned in a coronal position after raising a full thickness flap. Bone graft xenograftOSSEOGRAFT© was used to pack the angular defect.Upon review three months later, sufficient bone formation was seen radiographically. A gingivectomy was done to increase the crown height. Following healing restoration was done with a post-retained crown.

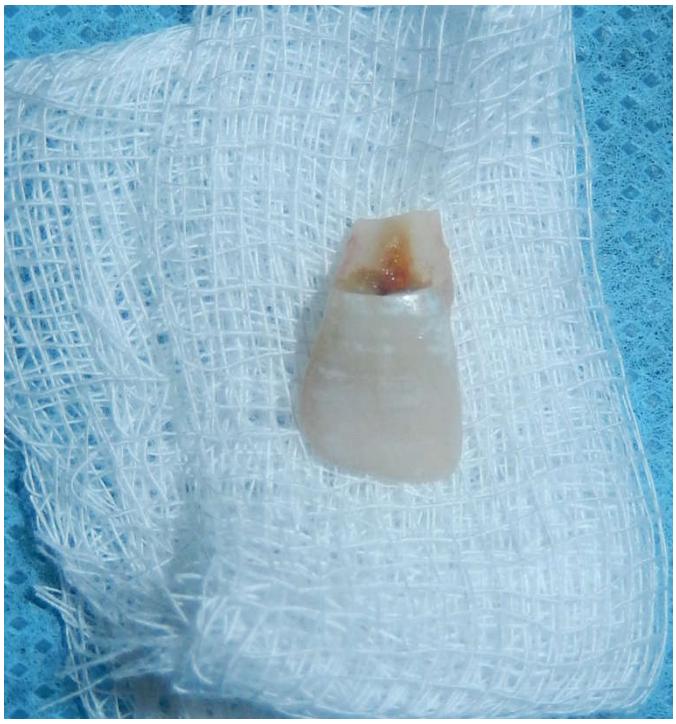
Case Picture 1: Preoperative View



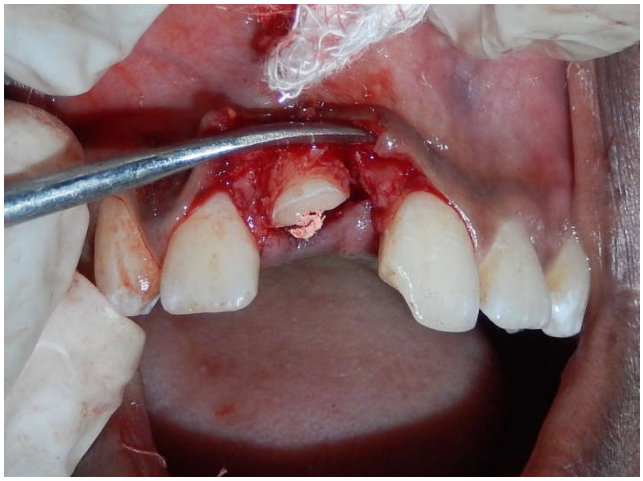
Case Picture 2: Radiographic View



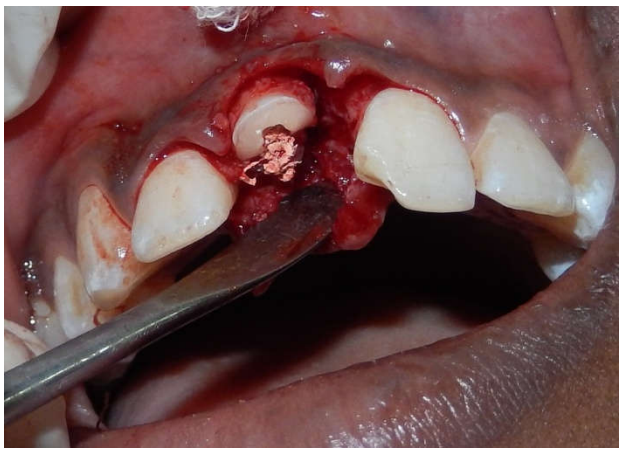
Case Picture 3: Fractured Segment of 11



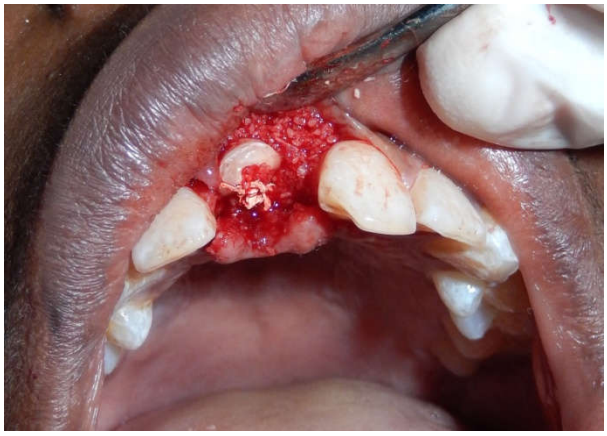
Case Picture 4: Flap elevation in relation to 11



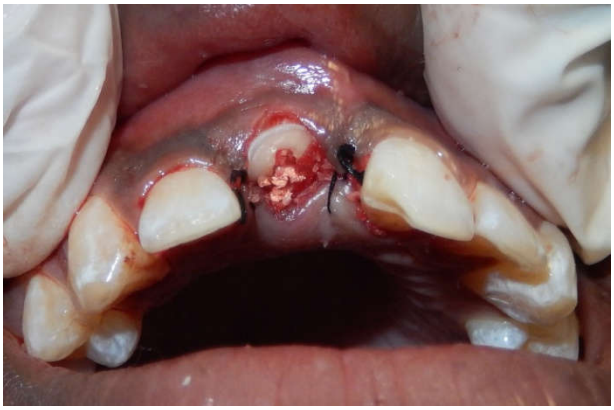
Case Picture 5: Extrusion of Fractured 11 done



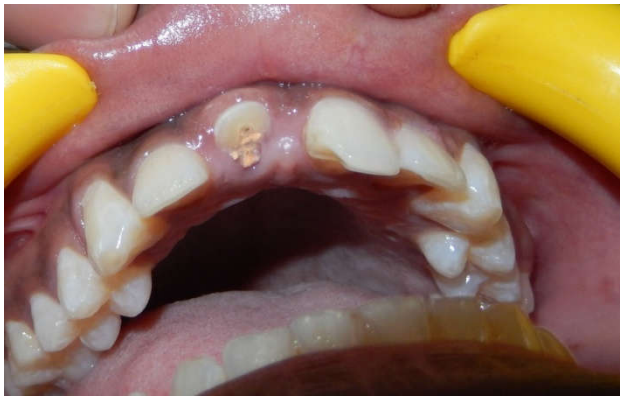
Case Picture 6: Angular bone defect packed with bone graft



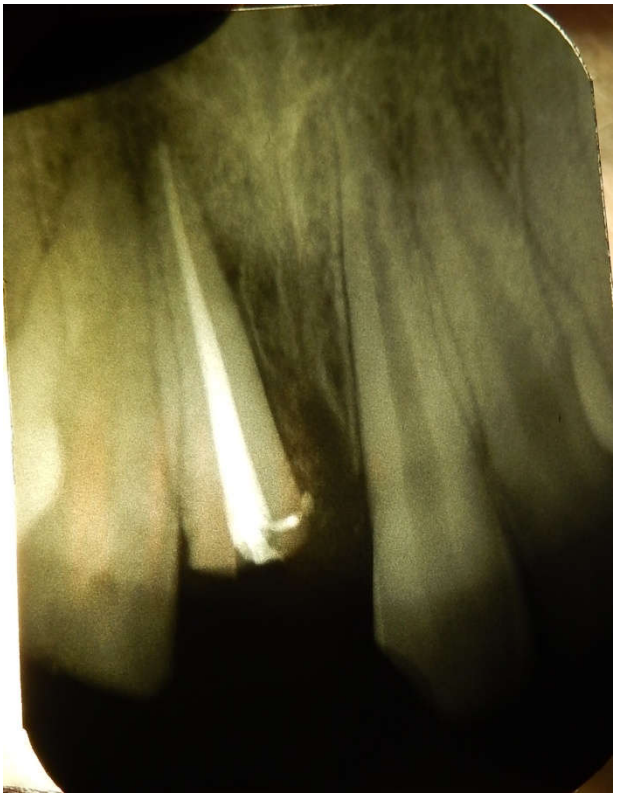
Case Picture 7: Sutures placed



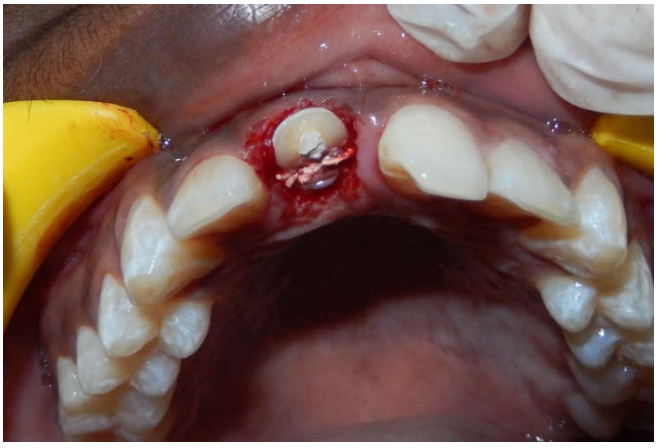
Case Picture 8: Postoperative view three months later



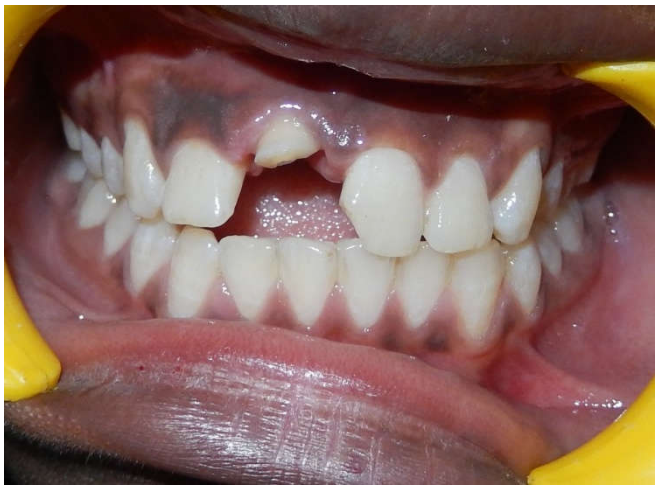
Case Picture 9: Radiographic Postoperative view after three months



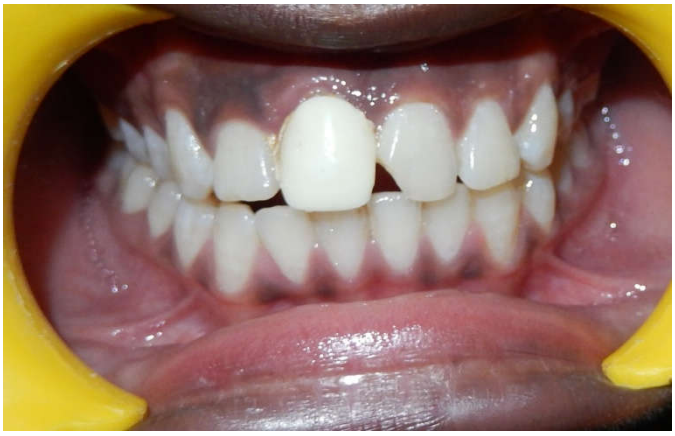
Case Picture 10: Crown Lengthening done by gingivectomy



Case Picture 11: Postoperative View after gingivectomy



Case Picture 12: Postoperative View after temporary crown restoration



Conclusion

The management of traumatized anterior teeth patients can be daunting for any practitioner. There is a need for multiple specialties to work together to decide upon a treatment plan and work towards the successful management. With a wide range of combinations for dental trauma, diagnosis and treatment plan can vary and success is not always guaranteed.The use of the guidelines given by the International Association of Dental Traumatology and the Dental Guide as online tools, can provide maximum chance for success in management of these type of cases.

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