INTRODUCTION

Trauma of the oral and maxillofacial area comprises of total 5% of all injuries¹. Among all facial injuries, dental injuries are most common, of which crown fracture occur more frequently. Traumatic injuries to the teeth can occur at any age, however commonly seen in children and adolescent, a missing tooth structure can cause emotional trauma. Since, the maxillary incisors are commonly affected, accounting for 96% of all crown fractures giving an esthetic dislike². Thus, the principle objective of management in such cases is rehabilitation of both function and esthetics.

Complicated crown fracture occurs in 2 to 13 % of all injuries³⁴. The extents of fracture, stage of the root maturation are imperative in deciding the treatment plan. If no pulp exposure is present, the fragment can be bonded if pulp exposure had occurred depending upon the condition of tooth endodontic treatment, post or surgical repositioning can be done .if the fractured fragment is available reattachment is the most appropriate treatment⁵. The technique of reattachment was first reported by Chosack and Eildeman, where they treated a complicated crown fracture with root canal followed by cast post and core⁶. Tennery reported the use of acid etch and bond technique for reattachment⁶.

Several methods such as circumferential bevelling, placement of chamfer, placement of V shaped notch, placement of internal groove and superficial over contouring can be done to enhance the adhesion between fracture and remaining tooth fragment⁷. This case report describes management of case of complicated crown fracture of maxillary central incisor by reattachment of fractured tooth fragment using glass fiber post, internal groove and circumferential bevelling to improve retention.

Case Report

A 21 years old male patient reported to the department of conservative dentistry and endodontics M.A. Rangoonwala dental college Pune, with complaint of broken tooth in maxillary anterior region. He had a history of accident 1 day prior, his medical history was non contributory. On extraoral examination Ellis class III fracture in the coronal portion of 11 was present .which extended from middle 1/3rd of crown labially to 2mm subgingivally on the lingual aspect. The fragment was loosely attached. The radiographic examination showed complete root formation with no extrusion and no periapical change.

The entire treatment plan was explained to the patient and an informed consent was taken prior to the beginning of treatment. Local anaesthesia was administered; the loosely attached tooth...
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The root canal was dried with paper points (Diadent ,Korea) and Obturated using gutta percha (Diadent ,Korea )with endodontic sealer (Sealapex ,Kerr,USA) using lateral compaction technique .Post space preparation was done using peesoamers. The fiber post (FIBRA POST, Switzerland) was used .An internal groove placement was done in the fractured fragment of receive post . The root canal was etched with 37 %phosphoric acid ,blot dried and single bond universal adhesive (3M,USA) was applied .The post was luted using dual cured resin luting cement (Luxacore ,DMG America). The incisor portion of the tooth and fractured fragment was etched and bonded using Luxacore (DMG, USA) followed by a composite overlay with appropriate shade match (B2 Filtex, 3M USA).

CONCLUSION
Reattachment of tooth fragment using fiber post is an effective, less invasive technique and efficiently restore the natural tooth anatomy and hence reattachment should be emphasized at the initial followed by other treatment options.

References