



TREATMENT OF TRAUMA CASE ON CENTRAL INCISORS:
CASE REVIEW

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ABSTRACT

The most common type of dental or oral traumas are the Fractured Central Incisors. Crown fractures that involves only Enamel and Dentine are classified as Uncomplicated dental trauma and fractures that involves Enamel, Dentine and Pulp are classified under Complicated dental trauma. Disfiguring of Central Incisors have very significant impact on a persons physical and emotional condition. Esthetically these types of fractures are most impactful. Depending on the condition of teeth after trauma, Full crown coverage or Veneer are the best esthetical treatment options.

KEYWORDS : Trauma, Composite restoration, Tooth Fracture, Full coverage Crown.

INTRODUCTION

Primary goal of treatment for these kinds of cases are esthetical and functional restoration. If the fracture is very small in size, it can be dealt with simple composite resin restoration which provides the most esthetical results and the integrity of the real tooth are maintained. Considering that the forces on anterior teeth are less than that of the posterior teeth, composite resins have a good long-term prognosis.

In case of pulp fracture, the most common treatment will be root canal treatment along with full coronal coverage with the help of crown. Pain from the trauma incident usually lasts longer than the root canal treatment induced pain. Swelling and bleeding on bruised lips are also one of the common findings in these kinds of cases.

Initial treatment of these kinds of patients include symptom management, pain relief, esthetic restoration. Once the initial swelling and trauma symptoms subside, then one can proceed with the permanent restorations as well as crowns and root canal treatment.

CASE REPORT

In this case we will be discussing a trauma case on a 28 years old male patient. Patient initially went to an emergency hospital as there was subsequent bleeding and swelling. After the swelling subsided, he was referred to the dentist. Unfortunately, patient took a little more time than advised and ended up with discolored tooth which has pulpal damage.

On initial investigation it was found that the Right Central incisor had an enamel and dentine fracture on the incisal third and on the Left Central Incisor, a pulp fracture was found which ended up with tooth discoloration Figure 1 and Figure 2. Pulp testing revealed normal Right Central Incisors and Non-vital Left Central Incisor. Periapical Radiographs confirmed the diagnosis and treatment plan was made.

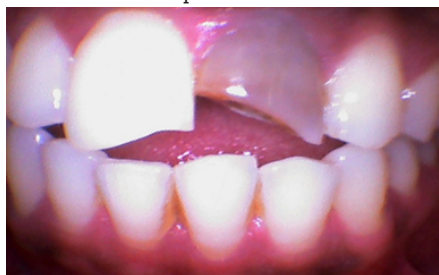


Figure 1: Fractured Central Incisors (Labial View)

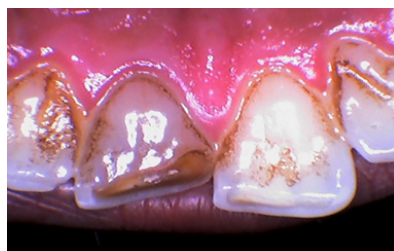


Figure 2: Fractured Central Incisors (Palatal View)

Initial treatment involved Composite restoration on Right Central Incisor followed by Root canal treatment of the Left Central Incisor. Upon completion of composite restoration and root canal treatment, a temporary crown was prepared and was left for 1 week to provide sufficient time for healing after root canal treatment.

After the first week, a follow up appointment was made to check the condition of the tooth which underwent root canal treatment Figure 3. After successful follow up, the provisional crown was removed from the fracture Left Central Incisor. Crown preparation for a full coverage Porcelain fused to metal crown was done and impression was taken. The porcelain fused to metal crown was prepared and cemented Figure 4.



Figure 3: Composite Restoration on Left Central Incisor and Root Canal treatment along with crown preparation on Right Central Incisor.

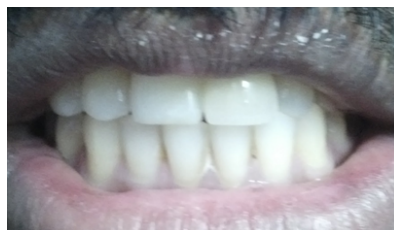


Figure 4: Crown Cemented on Right Central Incisor. Final patient appearance after complete treatment.

DISCUSSION

It is not always possible to preserve the fragment because the circumstances in which the fractures occur sometimes do not allow the patient to find it that guides the treatment for a composite resin reconstruction. Because of a conservative, timely and economical treatment option, composite resin restoration to restore permanent incisors with minimal or not very extensive crown fractures is an excellent approach.[1] [2] [3][4][5]

Resin composite selection should focus on strength and aesthetics-related aspects. The composite layering is the key in this context to obtain esthetically successful restorations [3]. The best choice is to initiate resin stratification from palatal enamel, especially in fractured anterior teeth, with a transparent composite to create the underlying structure for subsequent layers [3]. A polyester matrix, pre-fabricated acetate crowns, or personalized guides such as silicone matrix can be used to build the palatal enamel [4].

The variation of certain composite material characteristics such as translucency and opacity of composite resins requires the professional to know the different esthetic restorative materials and their optical behavior and can thus replace or correct color tones during the restorative process [2][3][4][5]

CONCLUSION

Uncomplicated fracture of Incisors can easily be treated using composite restorations. Complicated fracture of teeth usually requires more invasive pulp therapies and treatment. Once a tooth gets discolored due to fracture involving pulp, it usually becomes a prime candidate for full coverage restorations.

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