

## CASE REPORT

### Composite Build up by Indirect Technique (Template Technique)

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#### ABSTRACT:

Anterior teeth fracture is one of the most common phenomenon in young children and in adolescent. A thorough knowledge and protocol should be followed for accurate placement of the esthetic restoration in maxillary central incisor. Crown fracture in permanent teeth effects not only the appearance of the patient but also function and speech gets effected. This case report describes the restoration of the uncomplicated fractured maxillary central incisors, which requires less chair side time and economical for the patients.

**Key words:** Crown fracture, Esthetic restoration, Uncomplicated fractured maxillary central incisor.

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#### INTRODUCTION

The dental composite in dentistry has emerged as one of the most top ranked material for esthetic restoration in dentistry. Many studies have supported their performance and with the time dental composite showed better optical, bonding and handling properties.<sup>1</sup> Fracture to the anterior crown are very common injury which we can see in the children and adolescents<sup>2</sup>. Esthetic restoration is a technique sensitive procedure which success depends on operator skills and knowledge of the patients.<sup>3</sup> Anterior uncomplicated crown fracture has a serious effects not only in appearance but also effects the speech and functions of the patients.<sup>4</sup> Dental composite restoration success also depends in selection of shades and opaques. With the accurate combinations varying translucencies and opacities can be seen in the natural teeth<sup>5</sup>.

#### CASE REPORT

A 12 year-old boy patient had come to the Department of Paediatric Dental Department having fractured upper front teeth with esthetic complain. Patient gives a history

of fall down from staircase and fracture of teeth 8 months back. After clinical examination it was found to be Ellis class II fracture in relation to 11and21 (figure1). The teeth were asymptomatic and there was no injury to the soft and hard tissue. Radiographs was taken and no pulpal pathology was detected. So as a result, indirect composite restoration with template technique was decided for restoration of the fractured teeth. Procedure was started with taking maxillary and mandibular impression. The study model was made with the dental stone and mock preparation of fractured segment was buildup with modelling wax (figure 2). Following crown buildup, the anterior segment of the teeth was duplicated with the template of putty impression material (figure3). Then the labial surface of the putty material was removed from fractured segment to rebuild the lost tooth structure (figure 4). Later, the template try in was done clinically for checking the fitting of the template. First lingual wall buildup was done and then labial buildup after selecting appropriate shade (figure 5 and 6). Lastly minimal post-restoration finishing was done (figure 7).



Figure 1: Pre operative view.



Figure 2: wax buildup

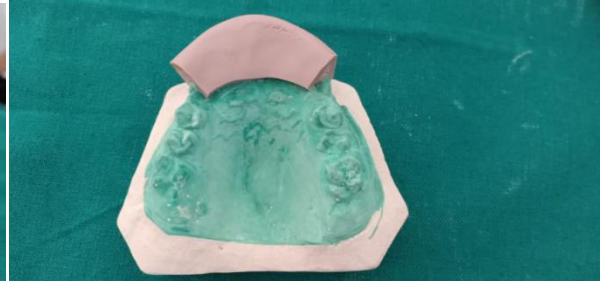


Figure 3: putty impression



Figure 4: labial surface of centrals removed



Figure 5: lingual wall buildup



Figure 6: labial wall buildup



Figure 7: Post-operative view

## DISCUSSION

Fracture of a permanent incisor is a disastrous experience for juvenile patients and generate internal impact on both the parents and children that make them uncomfortable in front of other children. Managing the fractured anterior teeth is one of the challenging task for clinician in both the ways like for functional and esthetics responsive. There are many factors which are responsible for the variation in treatment like socio-economic status, age and intraoral status of the patient at the time of treatment planning. Most important concern regarding composite buildup is the longevity because it can be fractured again. Hemmings et al gave a success rate of 90% with a mean follow up period of 30 months for direct resin composites placed at maxillary anterior teeth.<sup>6</sup> Patients those who are treated with anterior composite, satisfactory results are reported and with further improvement in chemical bonding composites the success rate will be improved.<sup>7</sup> A good polishing and finishing is recommended for obtaining appropriate luster.

## CONCLUSION

As restoring a fractured tooth is not a simple procedure, it can be a simple, effective and appropriate technique that will help all the requirements of dental personnels. The successful management of composite build up also depends dentist having good knowledge of the principles of occlusion, materials and techniques for restoration. Direct composite resin bonding agents deals with the esthetic problems of maxillary anterior teeth which is painless approach and gives successful outcome for the dentist and the patients.

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