

## Case Report:

### Composite artistry- speedy mock up

Dr.Shikha Kanodia\*, Dr.Manjit Kaur\*\*, Dr.Girish J. Parmar\*\*\*

\* Asst. Professor, \*\*Post Graduate Part 3, \*\*\*Head and Dean, Department of Conservative Dentistry And Endodontics, Govt. Dental College & Hospital, Ahmedabad, Gujrat, India

\* **Corresponding author:** Dr. Shikha Kanodia

---

#### ABSTRACT:

Increasing demand of smile design and improved esthetics is now well known in dental world. But the present lifestyle of everyone and of patients also, is busy, demanding, stressful, & overwhelming at times. Composite is a material which can be molded, and is of same color as that of teeth. They are reversible fix for teeth, but can be left in the mouth for several weeks or months. While the composite mock-ups are in the mouth, the dentist can make adjustments to them as per patient's choice. However, in smile design cases, the challenge is to meet patient's demands and esthetic expectations simultaneously keeping in mind another important factor i.e. time. Composite mock up provides reversible & fast outcomes. This case report presents a case where the easy, fast composite mock up technique is used to provide a pleasing smile to patient within a matter of hours

**Key words:** Composite resin bonding, speedy mock up, smile design

---

#### BACKGROUND:

Increased patient demand for optimal aesthetics with less invasive procedures has resulted in the extensive utilization of free hand composite resin bonding in the anterior region<sup>1</sup>. Composite is a material which can be molded, and is of same color as that of teeth. They are reversible fix for teeth, but can be left in the mouth for several weeks or months. While the composite mock-ups are in the mouth, the dentist can make adjustments to them as per patient's choice. However, in smile design cases, the challenge is to meet patient's demands and esthetic expectations simultaneously keeping in mind another important factor i.e. time. Composite mock up provides reversible & fast outcomes. Using an intraoral mock-up and a custom matrix allows practitioners to demonstrate their vision for the new smile<sup>2</sup>.

#### CASE REPORT:

Herewith we reported case of 37 years old male visited to Department of Conservative Dentistry & Endodontia, Government Dental College & Hospital, Ahmedabad, Gujarat, India with chief complaint of unpleasing smile due to presence of broken upper front teeth and spacing among several front teeth. The clinical pulp vitality results and radiograph were indicative of class IV fracture in #7, #8 and diastemas between #7, #8, #9, #10.

#### Possible treatment alternatives were:

1. Orthodontic correction of diastemas followed by conservative correction of fractured teeth
- 2 Full ceramic crowns
3. Porcelain fused to metal ceramic crowns
4. Porcelain veneers
5. Composite veneers direct / indirect

The patient's desire of reversible, cost effective correction in one day for social reason, left us with

best option for composite mock-up bonding that will be more speedy, providing near accurate esthetic and visualization on the part of patient as how his new smile will look like.

### TREATMENT PROGRESS

#### TECHNIQUE

1. Obtained diagnostic model of the patient.
2. Started and completed diagnostic wax up & designed patient's smile
3. A putty index duplicating the wax up was made:
  - a. Extending the putty index few teeth distal to teeth intended for restoration.
  - b. Extending the putty to capture few millimeters of the soft tissue.
  - c. The putty index was made thick enough to allow for rigidity.
4. Using #11 blade, the putty index was cut into two halves, palatal and buccal
5. Tried the index in the patient's mouth and verified seating.
6. Appropriate shade of composite selected that to be used.
7. Isolated the working area thoroughly.

8 The required beveling the fractured portion of teeth was done.

9. The acid etchant artfully applied with a small microbrush, sponge, or syringe etchant applicator

10. The prepared tooth was ready for bonding after acid etching, rinsing, and drying.

11. A thin layer of resin- bonding agent was applied to prepared tooth surface, lightly blown with air and cured.

12. Lined the imprint of teeth on putty with bonding agent and the teeth with selected shade of composite and seated swiftly in the patients mouth

13. Allowed light curing for 30 seconds with putty index in place and after removing the putty index, cured again for next 30-40 seconds.

14. Re-placed the palatal putty index half and preceded the same for buccal half.

15. After light curing a finishing bur series was used to shape the interproximal and gingival areas.

16. Final finishing was done with Swiss Flex kit using coarse, medium, fine and ultra fine discs in sequence.

### PHOTOGRAPHS:



1 PRE-OPERATIVE



2 WAX MOCK- UP (ANTERIOR VIEW)



3 WAX MOCK- UP (LATERAL VIEW)



4 PUTTY IMPRESSION OF CAST



5 & 6 TWO HALVES OF IMPRESSION



7 BEVELLING FRACTURED TEETH



8 ETCHING



9 ETCHED TOOTH SURFACE



10 BONDING AGENT APPLICATION



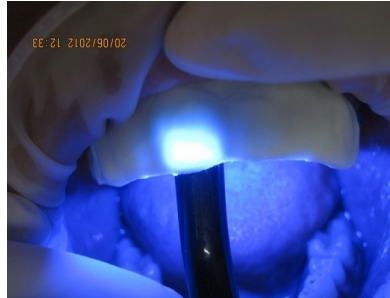
11 CURING PROCEDURE



12 LINING BONDING AGENT



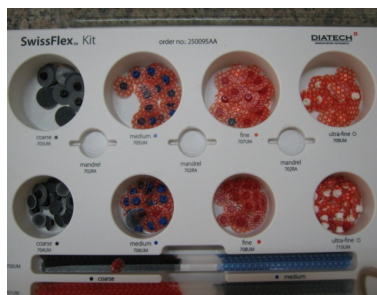
13 SEATING OF PALATAL HALF WITH RESIN



14 CURING



15 COMPOSITE FINISHING



16 FINISHING KIT



17 OCCLUSION CHECKED



18 RESULT



**PRE-OPERATIVE**

**POST –OPERATIVE**

### **DISCUSSION :**

Patient preference is important factor in determining the final esthetic outcome. It may be determined by presenting to the patient a number of smile options<sup>3</sup>.The intraoral composite mock-up which serves as a matrix for fast speedy work, is primarily used for indirect restorative cases in the aesthetic zone. Though it is extremely useful in a variety of applications eg.smile design, Class IV fractures, direct veneers<sup>5</sup>. But if only the addition of tooth structure is needed to enhance the smile, as in a diastema closure or the repair of a fractured tooth, this process is almost reversible, conservative and relatively inexpensive means of enhancing one's smile<sup>4</sup> and is often carried out in a single visit procedure in many dental practices. If any adjustments need to be made, then the composite can be re-modeled and the new effect evaluated now or

later. Should the patient decide not to go ahead with further treatment, the composite mock-ups can be removed and the original teeth polished up to their original state<sup>1</sup>. It can be applied as a thin veneer over study models or directly onto natural teeth. This process can be repeated several times until a result is achieved that both the patient and the dentist are pleased with.

### **CONCLUSION:**

A method to communicate the anticipated esthetic result to a patient is very important<sup>2</sup>.The consequence is that the dentist is able to control the esthetic artistry from the beginning to the completion of treatment<sup>3</sup>. The technique described in this article involving composite resin bonding does offer, however, the quickest and most economic means of providing aesthetic enhancement.

### **REFERENCES:**

1. Christopher C.K. HO , Diastema closure with a micro-hybrid composite resin , Clinical Dental Practice Issue : september/october , 2006-156.
2. Ahmad Bunashi , *EASY ESTHETIC MOCK-UP* , e-Journal of Dentistry, Oct - Dec 2011 , Vol 1 Issue 4, 32-37.
3. Christensen GJ., Informing patients about treatment alternatives. JADA, 1999; 130:730-732
4. Robertmarus , treatment planning and smile design using composite resin , Pract Proced Aesthet Dent 2006;1b(4):235-241
5. Morley J. ,The role of cosmetic dentistry in restoring a youthful appearance. JADA ; 1999;130:1166-72.

Date of submission: 18 October 2013

Date of Provisional acceptance: 29 October 2013

Date of Final acceptance: 25 November 2013

Date of Publication: 04 December 2013

Source of support: Nil; Conflict of Interest: Nil

