

# Management of Discolored Anterior Teeth with Ceramic Veneers: A Case Report

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**Abstract**— In the 21st century of aesthetic dentistry because of the development of a wide range of aesthetic materials and techniques, teeth that are discolored, cracked, deformed or malpositioned can be transformed and restored to a very desirable form. One of the most revolutionary techniques developed in the last 25 years is veneers. It has been demonstrated that having veneers improved one's self-esteem, interpersonal relationships, and professional success. A 35-year-old female patient reported with chief complaint of discoloured and carious upper anterior teeth. Veneering of the upper anteriors were carried out which improved the esthetic appearance.

**Index Terms**— Ceramic veneers, Discoloured teeth, Esthetics

## I. INTRODUCTION

Esthetic appearance of anterior teeth is one of the prime concern of the patient[1]. The presence of discoloured anterior teeth, midline diastemas, malposed or deformed teeth might cause psychological depression and reduce social engagement in the person[2],[3]. Ceramic veneers have been a good choice for treating anterior teeth for almost thirty years due to its attractive appearance, long lifespan and biocompatibility[4]. With very good aesthetic outcomes, ceramic veneers are a conservative way to restore the appearance of teeth with diastemas, discolorations and pits[1].

## II. CASE REPORT

A 35-year-old female patient reported to the Department of Conservative dentistry and Endodontics Sri Siddhartha dental college, Tumkur with the chief complaint of discolored and carious upper anterior teeth. Clinical and radiographic examination revealed that both maxillary central incisors had deep caries involving pulp(Fig.1),(Fig.2).RCT was carried out for both 11 and 21 followed by fiber post placement and core build up (Fig.3),(Fig.4).



**Fig.1** Pre operative photograph



**Fig. 2** Preoperative radiograph



**Fig. 3:** After endodontic treatment



**Fig. 4:** After fiber post placement and core build up

### Tooth Preparation

Labial preparation starts with placement of depth cut with depth cutting burs from mesioproximal line angle to distoproximal line angle. Three-depth incisions of 0.3, 0.5,

and 0.7 mm were made in the cervical, middle, and incisal thirds of the teeth respectively. Depth cuts prevent the labial over reduction. A long tapered medium or fine grit diamond bur was used to prepare the finish line. A final chamfer margin was prepared, measuring between 0.3 and 0.4 mm deep. Interproximal preparation was done. Incisal edge was beveled with butt joint preparation (Fig 5).



**Fig. 5:** After tooth preparation

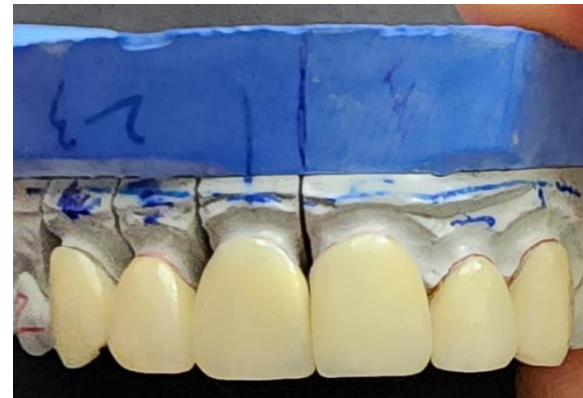
Following preparation, impressions were made using polyvinyl siloxane impression material using a putty-wash technique and casts were poured. Provisional restoration was fabricated and cemented (Fig. 6).



**Fig. 6:** After provisional restoration cemented

#### **Cementation of Ceramic Veneers**

Ceramic veneers were etched using 9% hydrofluoric acid. The internal veneer surface was coated with a silane coupling agent for 60 seconds, then allowed to air dry. Each tooth was etched for 15 seconds using 37% phosphoric acid followed by rinsing for 20 seconds, then allowed to air dry it. An adhesive was used. The veneers' intaglio surfaces were coated with a thin layer of light-polymerizing composite resin luting cement. The veneers were then positioned onto the prepared teeth and light-polymerized for 40 seconds from the incisal, labial, and palatal surfaces. Extra luting cement were removed (Fig.8). Restorations were examined in order to rule out any occlusal interference. The patient was highly satisfied with her new smile. After two weeks, the patient was called back for review, and the outcome was satisfactory.



**Fig. 7:** Lithium Disilicate (IPS Emax) Veneer



**Fig. 8:** After cementation of veneers

### **III. DISCUSSION**

Veneers is considered to be a more conservative treatment option than full crowns because veneer preparation requires less tooth reduction than full crown preparations. Ceramic veneers provide precise color match and translucency to the natural tooth. It fulfills the need for adequate retention [2]. It has been stated that ceramic veneers are successful and long lasting restoration with an estimated survival probability of 91% over a ten-year period[5]. Veneers can be used for a wide range of preparation forms, from simple facial veneers to more complex restorations requiring the replacement of more tooth structure. It has been demonstrated that ceramic veneers are a compelling solution for addressing functional and aesthetic issues in the anterior region. Extensive expertise in both the method and the materials used provides satisfying, consistent, and long-lasting results[2].

### **IV. CONCLUSION**

Ceramic veneers are very helpful in the management of discoloured anterior teeth with minimal dental tissue reduction. The clinical success depends on the proper case selection, correct application of materials and techniques available.

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