ABSTRACT

Esthetic dentists, these days must be well equipped to satisfy the needs of cutting edge society. All ceramic restorations have gained wide recognition as a number one mode of altering in esthetic dentistry. As affected person's esthetic expectancies maintain to growth, dental groups are challenged to perceive a systematic approach for accomplishing oral and facial esthetics with ceramics. Advances in ceramic materials and veneering strategies permit practitioners to repair features and esthetics using conservative and biologically sound methods as well as promoting a long time oral fitness. The esthetic and restorative applications of dental ceramics have expanded and will continue to evolve with time. A 25-year-old male came to Saveetha Dental College and Hospital with a chief complaint of broken, fixed partial denture and compromised esthetic because of discoloration of the tooth. On clinical examination, the patient had generalized enamel fluorosis affecting all the permanent teeth. The case document describes the esthetic management of mild to extreme fluorosis patient with ceramic veneers. Fluorosis is endemic in a few regions of northern India as a result of consuming well water with excessive fluoride content. Bleaching or microabrasion of critically fluorosed teeth are frequently ineffective or gives temporary results while composite resin veneers not only dis-color and wear with time, however quite frequently become chipped or debonded as glazed ceramics retain its color while being wear resistant, noticeably biocompatible and a lifelike esthetics. The esthetic and restorative applications of dental ceramics have expanded and will continue to evolve with time. However, the clinicians must be sensible in responding to the ever-inflating esthetic needs of the patients, such as every process in dentistry, the achievement of ceramic veneers, and crowns rely on understanding the principals involved in their fabrication and application. The success of treatment may be assured if the dentist follows a described protocol with each patient to ensure that each one factor consisting of smile design, margin placement material, and shade selection are considered. Communication among patient, dentist, and technician is of extreme significance. It is extremely vital to procure an informed consent from the patients before considering such cases. It’s also essential to discuss the practical and biological implications of his or her preference.

KEY WORDS: Smile correction, Smile rejuvenation, Veneers

INTRODUCTION

In recent times, there is an increase in the number of individuals in search of cosmetic dental strategies to enhance their smile and personality. Therefore, esthetic dentists, these days must be well equipped to satisfy the needs of cutting edge society. All ceramic restorations have gained wide recognition as a number one mode of altering in esthetic dentistry. As affected person’s esthetic expectancies maintain to growth, dental groups are challenged to perceive a systematic approach for accomplishing oral and facial esthetics with ceramics. Advances in ceramic materials and veneering strategies permit practitioners to repair features and esthetics using conservative and biologically sound methods as well as promoting a long time oral fitness.

Conventionally, all ceramic crowns and veneers were indicated to accurate unacceptable or atypical teeth contour, interdental spacing, gingival recession, malpositioned teeth, and mask enamel discolorations or to cope with minor teeth alignment troubles. However, the contemporary traits recommend the correction of adolescent or excessive tooth alignment concerns regarding healthy teeth. This refers to the remedy alternative of correcting minor or even excessive malocclusions the use of restorative procedures. Esthetics, treatment planning, and scientific care must be considered according to with interrelationship among the teeth, gingival tissues, lips, and face. Attention as to how the facial and mental parameters

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can have an effect on a natural smile layout should additionally be taken into account. Due to the fact ceramic veneers and crowns are mostly indicated for the improvement of esthetics,[8] the layout of a smile should admire the symmetry and the harmonious association of dentofacial factors.

CASE REPORT

A 25-year-old male came to Saveetha Dental College and Hospital with a chief complaint of broken, fixed partial denture and compromised esthetic because of discoloration of the tooth. On clinical examination, the patient had generalized enamel fluorosis affecting all the permanent teeth. Confluent pitting was present on most of the surfaces of the tooth with significant yellow-brown stains. Occlusion was in Class I relationship. Oral hygiene was good. The radiographic assessment confirmed good periodontal and pulpal health.

Diagnosis of moderate dental fluorosis was made based on history, clinical examination, and dean’s index.

TREATMENT PLAN

Basic oral prophylaxis was performed for the patient and given the age of the patient and severity of fluorosis, ceramic veneers were best desirable for the situation, and these veneers have the advantage of keeping most of the natural tooth structure at the same time as accomplishing the good cosmetic result. The patient was willing for the treatment of only maxillary eight anterior teeth because of economic constraints.

Stage 1

The preliminary treatment started through full mouth scaling and polishing followed through a 10-day gap [Figures 1 and 2] to permit complete gingival health recovery. This was observed by smile evaluation, preliminary shade choice [Figure 3], pictures, and study models to assess the occlusion.

Stage 2

Subsequent clinical appointment following silicone index preparation, final tooth education for ceramic veneers was accomplished. This was observed through final shade selection and rubber base impression. Labial tooth preparation [Figure 4] was performed using TF 13 and TR 13 (Mani Dia®) bur system. Interproximal reduction was performed with TC 11 and TC 21 (Mani Dia®) bur system. Incisal modifications and incisal wrap around were planned according to the tooth. The impressions were made after chord (Ultrapak®) packing with 00 and 000 size chords with the putty and light body (Zhermack®) impressions were taken. The teeth were temporized using Protemp™ 4® Temporisation Material 3M ESPE [Figure 5].

Stage 3

Ceramic veneers have been fabricated [Figure 8] using the pressable ceramic device (Pressed ceramic veneers IPS emax, Ivoclar Vivadent). The correct fit of veneers was confirmed both individually and collectively on the model after which on teeth. The patient was satisfied about shape form and color of veneers. Final cementation was executed [Figures 6 and 7] with rely-x u-200, 3M ESPE dual cure luting
composite. The contacts and occlusion were verified and found to be non-interfering. The instructions to the patient were given regarding mastication and function of ceramic veneers.

Stage 4

During the recall visit, the patient’s satisfaction was assessed with the verbal discussion. The patient seemed satisfied with the change of appearance and the shape of the tooth.

DISCUSSION

The case document describes the esthetic management of mild to extreme fluorosis patient with ceramic veneers.[9] Fluorosis is endemic in a few regions of northern India as a result of consuming well water with excessive fluoride content.[10] Bleaching or microabrasion of critically fluorosed teeth is frequently ineffective or gives temporary results while composite resin veneers not only dis-color and wear with time[4] but also quite frequently become chipped or debonded as glazed ceramics retain its color while being wear resistant, noticeably biocompatible and a lifelike esthetics. Ceramic veneers can be the restorative material of preference for severely fluorosed teeth.[11] One of the biggest gains is that they are extremely conservative of enamel structur.[12] In addition, ceramic veneers offer a predictable and a successful restoration with an anticipated survival possibility of 93.5% over 10 years.[13] The properties of dental ceramics such as color stability, mechanical strength, clinical toughness, esthetic appearance, and compatibility with periodontal tissues make the material an excellent choice for such treatment. [14] This case also highlights the right planning and management of gingival soft tissues to obtain an esthetic outcome and mild orthodontic disparity in teeth has additionally been appropriately controlled without any orthodontic intervention.

CONCLUSION

The esthetic and restorative applications of dental ceramics have expanded and will continue to evolve with time.[15] However, the clinicians must be sensible in responding to the ever-inflating esthetic needs of the patients[2] such as every process in dentistry, the achievement of ceramic veneers, and crowns.
rely on understanding the principals involved in their fabrication and application. The success of treatment may be assured if the dentist follows a described protocol with each patient to ensure that each one factor consisting of smile design, margin placement material and shade selection are considered. Communication among patient, dentist, and technician is of extreme significance. It is extremely vital to procure an informed consent from the patients before considering such cases. It’s also essential to discuss the practical and biological implications of his or her preference.

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