

BEAUTY LIES IN THE EYES OF BEHOLDER

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ABSTRACT:

Laminate veneering is a conservative method of restoring the appearance of discolored, malformed anterior teeth. We

present a case of a 21 year old female patient with discolored tetracycline stained anterior teeth managed successfully by ceramic laminates.

Key words: Esthetic, laminate Veneers

INTRODUCTION

In the era of interdisciplinary esthetic therapy, discoloured, fractured, malformed and malposed teeth can be restored to a highly esthetic and desirable form due to development of wide range of materials and techniques. Discolouration of enamel and dentin occurs due to administration of tetracycline for prolonged periods of time during tooth formation. Discolouration is usually bilateral, affecting multiple teeth in both arches. The discolouration can range from yellow -brown, brown, dark grey or blue depending on the type of tetracycline, dosage, duration of intake and patients age at the time of administration.

Tetracycline discoloration has been classified into three groups according to severity. First degree discoloration is light yellow, light brown or light gray and occurs uniformly throughout the crown, without banding. Second degree discoloration is more intense and also without banding. Third degree discoloration is very intense, and the clinical crown exhibits horizontal color banding. This type of discoloration usually predominates in the cervical region of the teeth.¹

Laminate veneering is an ultra conservative method of restoring the appearance of discoloured, pitted teeth and diastemas. It provides extremely good esthetic results and longevity of laminates have been reported to be approximately over 8 years [2] and a suitable alternative to more extensive restorative procedures.

Case Report

A 21-year old female patient reported to the Department of Conservative Dentistry and Esthetic Dentistry with the chief complaint of discolored teeth (fig. 1). All upper and lower teeth had uniform reddish brown discoloration prominently on the incisal/occlusal third without any pitting or grooves. This case report falls into the third degree of discolouration with intense continuous reddish brown discolouration throughout out the incisal and middle third



Fig 1: Pre operative

and a horizontal grayish band at the cervical region.

History and clinical examination revealed that the discoloration was due to tetracycline staining. Esthetic correction with ceramic laminates for upper anterior teeth was planned after clearly explaining to the patient, the various other treatment modalities along with their advantages and limitations highlighting the reasons for choosing the laminate veneering as the treatment modality.

Shade selection:

It is desirable to select a shade that is slightly lighter than desired by the patient. Therefore it is advisable to choose a shade with higher value and lower chroma. Keeping in mind that the the final colour of the restoration depends on the original tooth colour, B2 was selected as the shade for laminate and flowable luting cement.

The teeth were prepared for laminates as follows:

1. Labial reduction of 0.5 mm was achieved by depth cutting diamond instruments from mesioproximal line angle to distoproximal line angle.
2. Finish line was established using double grit tapered diamond point. A definitive chamfer margin of 0.3mm was prepared beginning at the height of the free gingival margin and extended towards distal papilla tip and then towards mesial papilla tip. The chamfer margin was continued from distal papilla tip to beginning of contact point, far enough lingually to hide veneer margin when viewed from lateral oblique view. Without breaking the contact from labial side, the finish line was carried from this point to the incisal embrasure, cutting just labial to entire contact area. Similarly the tooth was prepared on mesial side.
3. The procedure was repeated from left upper canine to right upper canine (fig 2).
4. Gingival retraction was achieved by retraction cord.

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Fig 2: Teeth Prepared for ceramic laminates



Fig 3: Ceramic laminates

5. Elastomeric impression was made and sent to laboratory for fabrication of ceramic laminates (fig 3).

Try in of ceramic laminates

1. The intimate adaptation of each laminate to the prepared tooth was checked
2. The teeth surfaces were first cleaned with slurry of fine flour of pumice.
3. Each laminate was individually tried starting from distal tooth.
4. Fit, margins and shade of all laminates were checked

Cementation of ceramic laminates



Fig 4 : Post operative

1. The prepared teeth surfaces were etched with 30-37% phosphoric acid for 15-20 s.
2. Bonding agent was applied and cured.
3. Flowable composite resin was applied to the teeth surfaces.
4. All the laminates were positioned and cured placed on teeth surfaces and light cured(fig4).

The post operative instructions were to avoid hard foods and extreme temperatures, avoid alcohol based mouth rinses in the first 72 hours. The patient was also instructed to maintain oral prophylaxis once in every four months and to avoid excessive biting forces and habit patterns (nail biting).

DISCUSSION:

Discolouration of either deciduous or permanent teeth may occur as a result of tetracycline deposition during prophylactic or therapeutic regimens instituted either in the pregnant fetus or postpartum in the infant³. Moffitt et al have observed that the critical period for tetracycline related discolouration in the primary dentition is 4 months in utero to 3 months postpartum for maxillary and mandibular incisors and 5 months in utero to 9 months postpartum for maxillary and mandibular canines⁴. According to Grossman and his associates, the use of oxytetracycline or possibly doxycycline may diminish tooth discolouration. Above all, effective alternatives to tetracycline are available and hence should be avoided from approximately the fourth month to the 12th year of childhood⁵

According to the literature esthetic correction of discolored, pitted, malformed teeth with laminates is a better choice over full coverage restorations. Ceramic laminates appear more polychromatic and natural tooth like because of its closer shade matching. Laminate veneers are technique sensitive and also requires art and skill to create natural appearance. Proper teeth preparations with proper definitive finish line and utmost care at try in and cementation of laminates can bring esthetically acceptable results. In addition advancements in shade matching, bonding and cementing media makes it the most accepted treatment for esthetic correction of the anterior teeth.. An excellent esthetic rehabilitation of the patient's discoloured teeth , with minimal sacrifice of natural tooth structure has been achieved. This has resulted in an immense boost in the patient's morale and self confidence .

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