

Smile Makeover with Porcelain Veneers: A Case Report

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Abstract

Dental veneers are a possible solution to help you achieve the look you desire. They are a popular choice for those with chipped teeth, a gap between teeth, or misshaped teeth. Dental veneers are thin covers that adhere to teeth to give teeth a more classically shaped look. This case report describes in detail the case selection, tooth preparation, laboratory procedures, and cementation of veneers on maxillary anterior teeth.

Keywords: Aesthetics, ceramic veneers, discoloration

INTRODUCTION

Reestablishing a patient's lost natural dental aesthetics is among the important topics of today's dentistry, in addition to function. Color, shape, and structural and position abnormalities of anterior teeth might lead to important aesthetic problems for patients. Any restoration should be fabricated using mechanical, biological, and aesthetic principles.^[1,2] Porcelain laminate veneers have become the aesthetic alternative to ceramic crowns and the traditional porcelain fused to metal. They are the restoration of choice where discolored teeth are resistant to bleaching, such as degree III and IV tetracycline stains, when anterior teeth require major morphologic modifications such as conoid teeth, diastemas, to prolong the incisal edge of the tooth to increase its length,^[3] and for extended rehabilitation of compromised anterior dentition such as coronal fractures, congenital, and acquired malformations where dentinoenamel junction is not altered.^[4-6]

CASE REPORT

A 26-year-old male patient reported to the Department of Conservative Dentistry and Endodontics, Triveni Institute of Dental Sciences, Hospital and Research Centre, Bilaspur,

Chhattisgarh, India, with a chief complaint of discolored anterior teeth and wanted cosmetic rehabilitation for the same. After examination, a provisional diagnosis of enamel hypoplasia due to moderate fluorosis was made. Dentofacial analysis and shade selection was done. Then shade was selected for the anterior laminates^[4] [Figure 1]. The treatment objectives were to manage the discoloration and modify the contours of the teeth in the most conservative method possible. Ceramic veneers were planned on maxillary anterior teeth. Patient consent was taken, and he was informed about the existing condition and treatment procedure.

TOOTH PREPARATION

A well-adapted, sectioned silicon matrix was made from the diagnostic cast, which was later used as a reference for teeth reduction.^[4,5,7,8] The aim was to provide some space into which the technician can build porcelain without over-contouring the tooth; to provide a finished preparation that is smooth and has no sharp internal line-angles, thus avoiding areas of high stress concentration in the restoration; to maintain preparation within enamel whenever possible; and to define a finish line to which the technician can work.

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Facial reduction

The preparation depth of the order of 0.4mm close to the gingival margin, rising to 0.7mm for the bulk, was achieved by using depth cutting burs. To mimic the natural curvature of the tooth and to provide even thickness of porcelain, two plane facial reduction was done.

Proximal reduction

Proximal reduction was kept just short of breaking the contact^[5] [Figure 2]. Incisal reduction of 1 mm was done with incisal overlap to improve translucency and to provide positive seat for luting.^[2,5]

Cervical finish lines

Equigingival chamfer finish line of 0.4mm maximum depth was made. All the internal line angles were rounded to reduce stresses in the margins of the veneers.

The impression was sent to a dental lab that custom-made the porcelain veneers to fit the teeth.

At the next visit, after any adjustments to be made, the teeth were cleaned, and the veneers were bonded to the tooth.

SHADE SELECTION

The teeth were cleaned with pumice and water to remove any extrinsic stains that exist.

CLINICAL TRY-IN

First, the fit and aesthetics were evaluated. All veneers should be placed without bonding medium on teeth to assess the fit [Figure 3].

CEMENTATION

The intaglio surface of the veneers were etched using 30% hydrofluoric gel, rinsed, and coated with a silane coupling agent.^[2,4] The prepared tooth were well isolated and etched with 37% orthophosphoric acid (Universal Etch, Dentsply), rinsed, and Prime & Bond NT dentin bonding agent was applied following manufacturer's instructions.



Figure 1: Preoperative



Figure 3: Clinical try-in



Figure 2: Prepared teeth facial view



Figure 4: Post-cementation

Calibra (Dentsply, Canada, United States) resin luting cement was used for the cementation of the porcelain laminate veneers. Once all gross excess was removed, the luting resin was cured using visible light activation unit for 40s each. Porcelain laminate veneers were finished using rotating abrasive disks (Soflex discs) [Figure 4].

DISCUSSION

Veneers are, without a doubt, modern dentistry's best way to replicate nature, which is always the goal of cosmetic dentistry—to replicate nature, not try to improve on it. Porcelain veneers are not the only option for changing one's smile but are commonly used when a patient wants to gain a lot of control of their smile (change color, size, shape, etc). The advantages of using these restorations are that they are biologically acceptable to the body owing to their increased chemical stability, lesser cytotoxicity, and reduced risk of causing irritation or sensitivity. These restorations show reduced plaque buildup and its easy removal due to their smoothly glazed surface.^[2,4,6]

Porcelain veneers can be a great investment, if they are the right option for you.^[6]

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Conflicts of interest

There are no conflicts of interest.

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