

Direct composite veneers - restoring esthetics by procuring patient demand: a case report

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ABSTRACT

Restoring a patient's lost dental appearance is one of the most significant subjects for contemporary dentistry. New treatment materials and strategies have been going ahead of the scene, step by step, to accomplish such a point. Most dental specialists lean toward more conservative and aesthetic approaches, such as direct and indirect laminate veneer restorations, instead of full-ceramic crowns for anteriors where aesthetics is extremely significant.

Laminate veneers are restorations which are envisioned to correct existing abnormalities, esthetic deficiencies and discolourations. Laminate veneer restorations might be handled in two distinct ways: direct or indirect. Direct laminate veneers do not need to be prepared in the laboratory. They are based on the principle of application of composite material directly to the prepared tooth surface in the dental clinic. Indirect laminate veneers may be produced from composite materials or ceramics, which are established to the tooth with an adhesive resin. For this situation report, direct composite laminate veneer technique utilized for patients with esthetic issues is portrayed, and half year follow-up is addressed. As an end, direct laminate veneer restorations might be a treatment choice for patients with the esthetic issues of anterior teeth on the off chance that like those reported here.

1. Introduction

Re-establishing a patient's lost natural dental esthetics is among the essential topics of today's dentistry, in addition to function and phonation [1]. Colour, shape, and structural and position abnormalities of anterior teeth might lead to critical esthetic problems for patients [2]. Covering the teeth with dental crowns is the widely preferred technique to take care of the issues aforementioned [3]. However, extreme preparations of teeth and harms to encompassing tissues, for example, gingiva, are a few detriments of crowns. In this manner, as of late, laminate veneer restorations, as a progressively esthetic and conservative treatment alternative, have been utilized in dentistry [4].

Laminate veneers are the type of restorations which are envisioned to correct existing abnormalities, esthetic deficiencies and discolourations [5].

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Laminate veneer restorations might be handled in two distinct ways, such as direct or indirect. Direct laminate veneers are not prepared in the laboratory, and these are based on the principle of application of a composite resin material directly to the prepared tooth surface in the dental clinic. Absence of need for tooth preparation, ease for patients contrasted and backhanded methods and other prosthetic methodologies, reversibility of treatment and no requirement for an extra adhesive cementing system are a few points of interest of this procedure. Intraoral polishing of direct laminate veneers is simple, and any splits or cracks on the restoration might be fixed intraorally. Further, marginal adaptation is superior to anything that of indirect laminate veneer restorations [6,7]. In any case, the primary disadvantages of direct laminate veneers are low resistance to wear, staining and fractures [6]. Indirect laminate veneers with high resistance against wearing down and cracks and stains have a few points of interest contrasted with direct laminate veneer restorations. Be that as it may, long chair time, greater expense and utilization of an adhesive cementing system are the primary detriments of indirect laminate veneer restorations [2,3]. Every new material or method introduced to the field of dentistry aims to achieve esthetics and successful dental treatments with minimal invasiveness [8]. Therefore, direct laminate veneer restorations have been developed for advanced esthetic problems of anterior teeth [2,3,9]. Tooth discolourations, rotated teeth, coronal fractures, congenital or acquired malformations, diastemas, discoloured restorations, palatally positioned teeth, absence of lateral incisors, abrasions and erosions are the main indications for direct laminate veneer restorations [1-3,10].

In this case report, a direct composite laminate veneer technique was used for patient with esthetic problems, is described, and success in six-month follow-ups is discussed.

2. Case report

A 45 years old female patient reported to the department of prosthodontics with a chief complaint of rotation of upper incisors and missing lower anteriors. Examination revealed cross-bite, deep-bite in the maxilla and partially edentulous in relation to 31, 32, 41, 42 (figure 1) with good periodontal status and no radiographic evidence of hard tissue diseases. The temporomandibular joint was asymptomatic with the non-

contributing medical history.

3. Procedure

Supragingival scaling followed by shade selection with vita classic shade guide was performed. Isolation of the operating area was achieved with the cotton rolls as the patient was experiencing gagging with a rubber dam. Mock preparation was done (figure 2). Both central incisors and lateral incisors were minimally prepared with a coarse diamond bur, depth roughly equivalent to half the width of the thickness of the facial enamel ranging from 0.5 mm mid facially tapering down of about 0.2 mm along the incisal edge.

A lite chamfer finish gingival marginal line was given and preparation cleaned with pumice slurry, water-washed and dried. The preparation was etched with 34% phosphoric acid for 30 seconds, rinsed with water and air-dried. A single layer of bonding agent (Te-Econom bond) was applied according to the manufacturer's direction and cured for 10 seconds in a visible light source.

A thin layer of radiopaque hybrid composite A2-Ivoclar Te-Econom plus was incrementally applied to the tooth surface and light-cured for about 40 seconds. Finally finishing, contouring and polishing was done with a super snap mini kit (Shofu) and polishing paste at the end of the procedure (figure 3). Clinical photographs were taken to evaluate the postoperative smile design. The patient was recalled for postoperative evaluation and check-up after one week and after six months. Tooth preparation was done in relation to 33 and 43 and prosthesis was given (figures 4 and 5).

4. Discussion

Direct and indirect laminate veneers, as esthetic procedures, have become treatment alternatives for patients with esthetic problems of anterior teeth in recent years [2,5]. In deciding between those two treatment options, the cost, social and time factors have to be considered [2]. Although ceramic laminate veneer restorations have a few favourable circumstances like shading soundness and high resistance against abrasion, they have a few drawbacks, including significant expense and long chair time [2,3] likewise. Also, they have a few issues, for example, need for additional adhesive cement. Also, wrong signs, dental specialist expert coordination issues during conceal harmonization,



Figures: 1. Pre-operative, 2. Mock Preparation, 3. Composite veneering done in relation to 12, 11, 21 and 22, and 4. Teeth Preparation and FPD cementation done in relation to 33-43.

failure to cover the underneath discoloured dental tissue because of the low preparation depth, particularly at the cervical region. Besides, long chair time for fixing simple cracks and straightforward negligence during cementation are as yet significant subjects waiting for solutions. Composite resins right existing lacks, increase the physical properties and are presently increasingly esthetic alternatives rather than laminate veneer applications [1]. Additionally, modern dentistry requires increasingly preservation is the treatment alternatives. In this way, composite laminate veneer restorations, which require insignificant removal of tooth structure, are outstanding amongst other treatment decisions [2,3]. With the preferences, for example, just a single appointment for the entire treatment time, extremely low expenses contrasted and the ceramics and no requirement for long laboratory techniques, direct composite laminate veneers are increasingly well known in the modern dentistry [1]. However, direct composite laminate restorations have still less resistance against abrasions and cracks contrasted and indirect composite laminate veneers and ceramic laminates [2,4]. Moreover, indirect composite laminate veneer restorations due to polymerization outside of the oral cavity, and ceramic laminate veneers due to better colour stability because of being less affected by the fluids of the oral cavity, are superior to direct composite laminate veneers.

5. Conclusion

The most preferred treatment method for anterior teeth with esthetic problems is laminate veneer restorations. However, the condition in which the direct, indirect composite resin and indirect ceramic laminate veneers are chosen is very important for the success of the treatment. The dentist has to decide after a complete review and a correct indication after a proper clinical examination. The dentist should also analyze the patient's socioeconomic status, esthetic expectations, and oral hygiene conditions thoroughly.

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