

AESTHETIC RESOLUTION WITH DIRECT FACETING IN COMPOSITE RESIN USING THE DIRECT TECHNIQUE - CASE REPORT

Vitor Lucas Rezende Magalhães¹

Gabriela Araujo Fernandes²

Ana Júlia Silva Rocha de Santana³

Ana Giulia Vilela⁴

Gustavo Henrique Rezende⁵

Ana Laura Alves Rodrigues⁶

Ana Clara Port⁷

Anna Beatriz de Sousa⁸

Daniela Borges⁹

Maria Eduarda Soares e Melo¹⁰

Jhullia Lopes Leão¹¹

Kálita Cristina Seabra¹²

Maria Luiza Dourado Acciari Lana Zini¹³

Luciana Carvalho Boggian¹⁴

Pollyana Sousa Lôbo El Zayek¹⁵

Ana Lúcia Machado Maciel¹⁶

Evangelical University of Goiás – UniEVANGÉLICA¹⁻¹⁶

ABSTRACT

The growing demand for dental procedures aimed at improving dental harmony and smiles has led to advances in materials and techniques, especially minimally invasive procedures. Any dental changes affect individuals' self-esteem and social interaction, especially tooth discoloration, which is a frequent complaint among patients seeking aesthetic solutions.

Objective: To report the restoration of the aesthetics of a discolored anterior tooth using a direct composite resin veneer. **Case report:** The patient, MRF, female, attended the UniEVANGÉLICA Dental Clinic complaining of aesthetic dissatisfaction with a "very yellow front tooth, different from the others." Upon performing an intraoral examination, it was noticed that tooth 21 was discolored, and periapical radiography showed satisfactory endodontic treatment, with no periapical changes. A direct composite resin veneer was proposed, following the clinical protocol for composite resin restorations, using modified absolute isolation of the operative field, with excellent immediate aesthetic results. In a subsequent session, finishing and polishing completed the restorative procedure. **Conclusions:** With the constant improvement of composite resins and adhesive systems, direct aesthetic procedures have been performed satisfactorily, allowing the restoration of smile harmony and improving the patient's self-esteem.

Keywords: Composite Resins; Dental Aesthetics; Smile; Dental Veneers.

INTRODUCTION

In recent years, there has been a growing aesthetic appeal in society for facial aesthetic treatments, which, in addition to enhancing smiles, also improve people's self-esteem, quality of life, and social interaction (GONÇALVES DE

CAMPOS, 2021; REIS DE SOUSA, 2023; LOPES DA COSTA, 2024; ZIMMER, 2024). Thus, the demand for pleasant dental aesthetics has increased research into materials with new technologies and improved conservative restorative techniques that optimize the quality and naturalness of dental aesthetics, aiming at the predictability of the procedure and accessibility to individuals (BRAZ DA SILVA, 2021). This evolution has enabled the aesthetic and functional rehabilitation of the smile with safety, efficiency, and preservation of dental structure, promoting harmonious and long-lasting results with the use of composite resins (FREITAS, 2021; REIS DE SOUSA, 2023; ZIMMER, 2024).

One of the main complaints of patients is related to the unsatisfactory appearance of the anterior teeth, as they are more visible and have a greater impact on facial harmony. When this balance is broken, mainly due to tooth discoloration, an unpleasant appearance is created, and cosmetic dental intervention is required (BRAZ DA SILVA, 2021).

Composite resin veneers offer an affordable and versatile option for correcting changes in tooth color and shape, position, and structural loss due to pathological or physiological wear, fractures, among other conditions, allowing for quick and personalized corrections (FREITAS, 2021; GONÇALVES DE CAMPOS, 2021; ROCHA 2021; REIS DE SOUSA, 2023; ZIMMER, 2024; LOPES DA COSTA, 2024). In addition, they mimic tissues naturally, the technique is reliable and safe, low cost, and repairable (FREITAS, 2021; REIS DE SOUSA, 2023), enabling the preservation of the tooth structure (LOPES DA COSTA, 2024; ZIMMER, 2024).

It is worth noting that direct composite veneers are a challenge for dental surgeons, as they require experience and clinical skill, combined with knowledge of the materials used (ZIMMER, 2024; LOPES DA COSTA, 2024).

The dental surgeon must analyze the feasibility of cosmetic treatment based on technical and scientific knowledge (ROCHA, 2021). Individualized planning takes into account each patient's reality, with the aim of achieving aesthetic harmony of the smile and restoring function (BRAZ DA SILVA, 2021).

CASE REPORT

A female patient visited the UniEVANGÉLICA Dental Clinic complaining of aesthetic dissatisfaction with a "front tooth that was very yellow, different from the others." Upon performing an intraoral examination, it was noticed that tooth 21 was darker than the others, leaving an unharmonious appearance. A periapical radiograph was taken, which showed satisfactory endodontic treatment, with no periapical changes.

A composite resin veneer using the direct technique was proposed to the patient to restore the aesthetics of the darkened tooth.

During the clinical session, the color of the composite resin A2 was selected for the direct composite resin veneer. Standard cavity preparation for veneers was initiated by making a cervical channel to mark the termination line slightly below the gingival margin. Next, three cervical-incisal channels were made on the vestibular surface, and the vestibular surface was worn down following the channels until the preparation was complete.

Modified absolute isolation was performed, in which the rubber dam was cut with scissors to the extent necessary to expose the teeth to be restored. No clamps were used for isolation. The edges of the dam were "glued" to the vestibular and palatal gingiva with cyanoacrylate.

The restorative protocol for composite resin was then followed. For acid conditioning, 37% phosphoric acid was used for 30 seconds on the enamel and 15 seconds on the dentin, followed by rinsing for twice the time. The two-step conventional primer/adhesive Single Bond (3M/ESPE) was applied in two layers, followed by air drying and light curing of the last layer for 20 seconds, with polyester strips on the adjacent teeth to protect and isolate them.

The veneer was started with a layer of Herculite Dentina A1 (Dentsply/Sirona) composite resin to hide the darkened dentin and light-cured. The next layer was Herculite Dentina A3 (Dentsply/Sirona) and the last, superficial layer, to reproduce the enamel, was Filtek Z250 A1 (3M/ESPE). The final polymerization was 40 seconds.

After removing the absolute isolation, the occlusion was checked and the initial finishing was performed. In the next session, the finishing and polishing

were completed using fine and extra-fine diamond tips, followed by abrasive rubber tips for composite resin polishing, discs with decreasing abrasiveness, and finally, a felt disc with Diamond R (FGM) diamond paste, thus immediately restoring the tooth color and returning the harmonious smile so desired by the patient.

CONCLUSIONS

Composite resins proved to be highly effective in the aesthetic restoration of the smile in direct veneers, following an appropriate color selection and clinical application protocol, offering an excellent cost-benefit ratio, being a conservative procedure, and presenting immediate results with safety and efficacy.

Aesthetic rehabilitation restored a harmonious smile, which boosted the patient's self-esteem and self-image, as the success achieved in this aesthetic treatment met her expectations.

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