



TOO MUCH WHITE, NOT ENOUGH NATURAL: THE DANGER OF ARTIFICIAL SMILES

BRANCO DEMAIS, NATURAL DE MENOS: O PERIGO DOS SORRISOS ARTIFICIAIS

DEMASIADO BLANCO, MUY POCO NATURAL: EL PELIGRO DE LAS SONRISAS ARTIFICIALES

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ABSTRACT

Objective: The objective of this narrative review article is to discuss the trend of “white, beautiful, aesthetic and harmonious” teeth made of composite resin, which in their vast majority cause problems to oral health and completely deviate from what would be an aesthetic and harmonious smile. Methodology: In order to acquire the maximum amount of information rich in content and with a scientific basis, it was necessary to conduct research in databases that provided this content,

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so searches were made in the following databases: BVS/BIREME, The Cochrane Library, PUBMED Central, Web of Science, Scielo and PROSPERO. Results: Studies show that most professionals perform composite resin veneers due to the great potential financial return that this procedure can bring, seeking to perform the procedure for financial reasons rather than seeking oral rehabilitation itself, which causes many dentists to perform this dental service without worrying about delivering something that brings health and harmony to the patient, delivering a service that is artificial and that impacts the patient's health. Conclusion: A range of studies indicate that these composite resin veneers, when made with low-quality resins and light-curing devices, cannot have a long useful life. Furthermore, when they are poorly adapted and made without respecting the patient's biological structure, they can trigger problems with the patient's oral health, such as gingivitis, periodontal diseases, psychological problems and other conditions.

Keywords: Smile. White. Artificial Tooth. Dentistry. Resins.

RESUMO

Objetivo: O objetivo deste artigo de revisão narrativa é discutir a tendência de dentes “brancos, bonitos, estéticos e harmoniosos” feitos de resina composta, que em sua grande maioria causam problemas à saúde bucal e desviam completamente do que seria um sorriso estético e harmonioso. **Metodologia:** Para adquirir o máximo de informações ricas em conteúdo e com embasamento científico, foi necessário realizar pesquisas em bases de dados que disponibilizasse esse conteúdo, para isso foram realizadas buscas nas seguintes bases de dados: BVS/BIREME, The Cochrane Library, PUBMED Central, Web of Science, Scielo e PROSPERO. **Resultados:** Estudos mostram que a maioria dos profissionais realiza facetas de resina composta devido ao grande potencial de retorno financeiro que esse procedimento pode trazer, buscando realizar o procedimento por questões financeiras ao invés de buscar a reabilitação oral em si, o que faz com que muitos dentistas realizam esse serviço odontológico sem se preocupar em entregar algo que traga saúde e harmonia ao paciente, entregando um serviço que é artificial e que impacta na saúde do paciente. **Conclusão:** Uma série de estudos indica que essas facetas de resina composta, quando feitas com resinas de baixa qualidade e dispositivos de fotopolimerização, não podem ter uma vida útil longa. Além disso, quando mal adaptadas e feitas sem respeitar a estrutura biológica do paciente, podem desencadear problemas na saúde bucal do paciente, como gengivite, doenças periodontais, problemas psicológicos e outras condições.

Palavras-chave: Sorriso. Branco. Dente Artificial. Odontologia. Resinas.

RESUMEN

Objetivo: El objetivo de este artículo de revisión narrativa es discutir la tendencia de dientes “blancos, bellos, estéticos y armoniosos” hechos de resina compuesta, que en su gran mayoría causan problemas a la salud bucal y se desvían por completo de lo que sería una sonrisa estética y armoniosa. **Metodología:** Con el fin de adquirir la máxima cantidad de información rica en contenido y con base científica, fue necesario realizar una investigación en bases de datos que proporcionan este contenido, por lo que se realizaron búsquedas en las siguientes bases de datos: BVS/BIREME, The Cochrane Library, PUBMED Central, Web of Science, Scielo y PROSPERO. **Resultados:** Los estudios demuestran que la mayoría de los profesionales realizan carillas de resina compuesta debido al gran retorno financiero potencial que este procedimiento puede traer, buscando realizar el procedimiento por razones financieras más que buscar la

rehabilitación bucal en sí, lo que provoca que muchos odontólogos realicen este servicio odontológico sin preocuparse por entregar algo que traiga salud y armonía al paciente, entregando un servicio que es artificial y que impacta la salud del paciente. Conclusión: Diversos estudios indican que estas carillas de resina compuesta, al ser realizadas con resinas de baja calidad y aparatos fotopolimerizables, no pueden tener una larga vida útil. Además, cuando están mal adaptadas y realizadas sin respetar la estructura biológica del paciente, pueden desencadenar problemas en la salud bucal del paciente, como gingivitis, enfermedades periodontales, problemas psicológicos y otros.

Palabras clave: Sonrisa. Blanco. Diente Artificial. Odontología. Resinas.



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INTRODUCTION

Restorative dentistry has evolved significantly over the years, with the development of new products, equipment, and revolutionary procedures that, in theory, should not only improve the health and biological function of the patient but also provide aesthetics, harmony, and satisfaction by achieving a smile that inspires confidence and happiness. However, it is observed that, in current dental practice, many professionals neglect this integrated approach.

Historically, the perception of an "aesthetic and beautiful" smile by the population was quite different from current aesthetic standards. In the past, restored teeth or teeth entirely composed of materials such as amalgam, gold, and silver were considered symbols of beauty and high socioeconomic status. These materials not only restored dental function but also served as indicators of social position within the community. The use of dental amalgam dates back to the Tang Dynasty in China, around 659 AD, and was later adopted in other cultures as a common restorative material (Eames *et al.*, 1977). Over the years, there has been a significant shift in materials and aesthetic preferences. Today, materials such as composite resins, which aim to closely resemble the characteristics and shades of natural teeth, have largely replaced traditional metallic materials. This transition is partly due to the increasing demand for aesthetic solutions that provide a more natural and discreet appearance (Demarco *et al.*, 2012).

While new restorative materials offer various benefits, especially in terms of aesthetics, it is imperative that dentists know how to apply them correctly in their patients' oral cavities, whether through restorations or veneers. Incorrect application of these materials can result in

negative impacts on oral health and the balance of the oral cavity. Furthermore, poorly executed aesthetic procedures can affect patients' psychological well-being, leading to issues such as social anxiety and decreased self-esteem (Ahmed *et al.*, 2021). Unfortunately, in current dental practice, some professionals use dental materials, such as composite resin, inappropriately, prioritizing immediate aesthetic results over long-term oral health. This approach can compromise not only the functionality and durability of restorations but also periodontal health and overall patient satisfaction (Brouwer *et al.*, 2022).

Thus, the objective of this narrative review article is to discuss the current trend of seeking “white, beautiful, aesthetic, and harmonious” teeth made of composite resin, which, in many cases, can cause oral health problems and deviate from what would be an aesthetic and harmonious smile.

METHODOLOGY

This article is a narrative literature review, so it was necessary to know how this type of review works, what its characteristics, structure and approach are. Thus, it was necessary to use Rother's study (2007) as a basis and guide during the creation and development of this article, as it is a work that explains the differences between a narrative review article and a systematic review article, presenting the characteristics and structure of each, guiding how this article should be composed. In addition, in order to acquire the maximum amount of information rich in content and with a scientific basis, it was necessary to conduct research in databases that provided this content, so searches were made in the following databases: BVS/BIREME, The Cochrane Library, PUBMED Central, Web of Science, Scielo and PROSPERO. Furthermore, in order to access only articles, research and other data related to the topic, the following descriptors were used to narrow down the results of searches carried out in databases: Smile; White; Artificial Tooth; Dentistry.

RESULTS

Prevalence of Composite Resin Veneers and the Search for White Smiles: The search for aesthetically whiter and more aligned teeth has become increasingly popular, especially among patients who seek aesthetics over functionality. According to several studies, very white

teeth, often obtained with composite resin veneers, are not only a reflection of contemporary aesthetic standards, but also a trend promoted by marketing, the media and especially by digital influencers, who portray an idea of a perfect life and a perfect body, which leads to an increase in the number of aesthetic procedures, contributing to the search for a smile seen as “beautiful and natural”, causing more resin veneer procedures to be performed. The literature indicates that the idealized dental aesthetics of some patients can be distorted by the search for the “perfect smile”, disconnecting from the reality of natural dental characteristics and facial harmony, resulting in a smile that does not have the accidents and anatomical characteristics of natural teeth, which means that what is seen as natural is actually artificial, as it completely deviates from the characteristics and structures of a natural smile (Martin *et al.*, 2023).

Professional and Financial Motivations: One of the main reasons why dentists choose to perform composite resin veneers instead of more conservative treatments such as performing a good prophylaxis combined with in-office whitening, which could already satisfy in some cases, or performing procedures that require greater technical complexity, is the immediate financial return that composite resin veneers provide, where a dental surgeon can perform an arch in the same day and obtain a large profit, especially if the patient chooses to have them placed on the lower and upper arch. Studies indicate that quick procedures, such as resin veneers, offer a higher profit margin for professionals, which can lead to clinical practices that do not prioritize the patient's oral health, but rather immediate aesthetics and financial gain, which in certain cases can have a huge impact on the oral microbiota and its balance (Santos *et al.*, 2022).

Problems Related to the Use of Low-Quality Resins: Composite resin veneers, when not made with quality materials or when poorly adapted, can result in several oral health problems. Low durability due to low-quality resins, combined with resins that have been light-cured by low-quality light-curing devices, and susceptibility to early wear are critical factors that contribute to the failure of these composite resin veneers, which is commonly seen and which is mostly linked to one of these factors. Furthermore, the infiltration of food and bacteria due to poorly made margins can cause infections and gum disease, which can trigger gingivitis and can progress to periodontitis if left untreated, something that started due to a procedure that did not respect the margins and biological anatomical structures. These problems are often exacerbated by the lack of adequate follow-up after the placement of veneers or by a dentist who did not respect the patient's natural and biological limits, exceeding them, which further compromises the patient's oral health (Viana *et al.*, 2021; Santos *et al.*, 2025).

Psychological and Social Impacts: Studies also suggest that patients who seek artificially whiter teeth may experience psychological impact due to the discrepancy between their idealized smile and their natural appearance, or in certain cases because they created an idea of a smile that they wanted and saw as “beautiful”, but after the veneers were placed, they were faced with an opposite reality, where they started to have large, extremely white artificial teeth or even started to live with a reality where their gums started to bleed, have a bad smell and become swollen, which in certain cases causes the patient to have low self-esteem or even try to avoid smiling and isolate themselves from society. Thus, it is clear that social pressure to maintain impeccable dental aesthetics can affect self-esteem, especially if the treatment does not achieve the expected results (Tavares *et al.*, 2020).

DISCUSSION

The dentist's role should always be to promote the health and well-being of the patient. Although composite resin veneers can be a quick solution to correct aesthetically unfavorable teeth, professionals should be aware that opting for this treatment may compromise long-term oral health. Performing procedures without adequately considering the long-term effects of resin veneers is ethically questionable, as it involves an aesthetic choice at the expense of functionality and health. Studies indicate that treatments that do not respect the natural dental anatomy can impair masticatory function and increase the risk of periodontal problems (Silva *et al.*, 2023).

The durability of composite resin veneers, particularly when made with low-quality materials or poorly applied, has been a significant concern. The use of low-quality resins and the inadequate application of the photopolymerization light are determining factors in the reduction of the useful life of these veneers. When compared to porcelain veneers, composite resin veneers have a shorter lifespan and are more susceptible to wear and discoloration over time. This premature wear can lead to the need for frequent repairs, which represents a disadvantage for the patient from both an aesthetic and financial point of view (Dantas *et al.*, 2021).

In addition to biological issues, the search for an excessively white smile can negatively affect the patient's perception of their appearance, leading to frustration and dissatisfaction. This can be intensified when the desired smile is not achieved or when the initial results do not meet expectations. The psychological impact of this aesthetic pressure is widely discussed in studies that suggest that the increase in aesthetic dental interventions should be accompanied by a

psychological support approach to help patients manage expectations and self-perception (Branco *et al.*, 2021).

The growing trend for aesthetic dental treatments, such as composite resin veneers, is marked by an excessive emphasis on artificiality, with little consideration for the naturalness of the teeth. A truly aesthetic smile must respect the individual characteristics of the patient, maintaining harmony with their facial and dental structure. Personalization of dental treatments is essential to ensure that dental aesthetics are achieved without compromising the naturalness of the smile. In addition, it is necessary for the patient to be advised on the risks and benefits of resin veneers in order to make an informed decision about the treatment (Silva *et al.*, 2022).

CONCLUSION

Thus, it is clear that dentistry currently has certain professionals who, instead of caring about the health and well-being of the patient, actually care about financial returns above all else, putting the well-being of the patient in second place, in addition to the large number of poorly trained dentists who are performing this type of procedure without worrying about the quality that is being delivered, where the vast majority do not seek to improve their knowledge on how to use composite resin, for example by specializing in the area of restorative dentistry, improving or taking courses on restorative materials and their clinical application.

Therefore, due to this problem that has occurred within the professional dental environment, many patients who have acquired composite resin veneers from dentists who have done so in a way that does not respect the biological limits and margins of the teeth and gums, many patients have developed gingivitis, due to the biological space that has not been respected by a portion of the dentists who perform this type of procedure, damaging the balance of the oral cavity and the patient's self-esteem, making it necessary for the patient to seek another professional who is more qualified to do rework that respects the biological space and function, meaning that in addition to having their oral health and self-esteem damaged, the patient also has a high expense at a time when these veneers are expensive on the market.

Furthermore, another factor that is linked to this increase in the demand for composite resin veneers is the moment that our society is going through, where aesthetics are often placed on a pedestal and above function, where more and more people are concerned with just pleasing the eyes of society, forgetting the true importance of health, all of this due to a distorted idea that

the whiter the teeth, the more beautiful they are, something that has been taken as "harmonious, beautiful, natural" but that in reality, in addition to most of the time harming oral health when poorly done, there is nothing harmonious and natural about it if the dentist responsible for performing this procedure does not respect the anatomical and biological characteristics of the teeth, actually doing something totally artificial, which in reality should not be seen as beautiful, but which unfortunately has happened due to this distortion of beauty that society has faced.

In this way, the conclusion is reached that a range of studies indicate that these composite resin veneers, when made with low-quality resins and light-curing devices, cannot have a long useful life. Furthermore, when they are poorly adapted and made without respecting the patient's biological structure, they can trigger problems with the patient's oral health, such as gingivitis, periodontal diseases, psychological problems and other conditions.

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