Porcelain Veneers for Children and Teens

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Abstract

This article will discuss the advantages of providing our young patients and their parents an alternative in the types of veneers that dentists can offer. The author will discuss the alternatives that we have available to improve our patients' smiles—the advantages and disadvantages of each, and give case histories providing examples of these restorations.

Introduction

Our patients' parents are bombarded by the media showing cosmetic changes that can be provided by plastic surgeons, oral surgeons, orthodontists and other medical and dental professionals to improve their appearances. Movies, television, and print media have inundated the current generation of youth, generation "Y", with everyone being seen as "beautiful." Parents want the best in dental restorations for their children—pain free, cosmetic, and cost-effective dentistry that we can provide. With the advances in the materials and devices that we have available, we now have the ability to offer our young patients alternatives in improving their smiles. According to a recent article, the facial features that people would change most would be their smile. Fifty percent of the adult population in the United States is not pleased with their smile. (1) As dental professionals we should give parents a choice of restorations that are available and discuss the pros and cons of each. The indications for esthetic

restoration of the anterior teeth include caries, trauma, congenital defects, unesthetic contour and shape of teeth, tooth discoloration, and malalignment. The fabrication of porcelain or resin veneers allows for major contour and shade alteration of the labial surfaces of anterior teeth, according to Wei, S.H., et al. (2) The purpose of this article is to discuss alternatives to the preparation of teeth for veneers. I will use case histories to illustrate the advantages of no-prep veneers. As a pediatric dentist, my duty to my patients and their parents is to offer a choice of no-prep porcelain veneers, when indicated. The advantages of these restorations include the following: no anesthetic, no pain, and the removal of little or no tooth structure in providing a long-lasting and cost-effective restoration. Having been a dentist for 33 years, it is very exciting to offer my patients this alternative.

Discussion: The Cerinate Lumineers (Den-Mat) are made from pressed ceramic crystals with reinforced leucite crystals which can be as thin as 0.2mm. Thus, these veneers can be placed with little or no removal of tooth structure. In a study by Strasseler and Weiner it has been shown that 94% of the no-prep Cerinate Lumineers (Den-Mat Corporation) have been clinically successful and 100% retention for over 20 years. (3) Dr. Louis Malcmacher has found that the Cerinate Porcelain Veneers are “not difficult to do when the right porcelain is used, and have a higher rate of acceptance and satisfaction, especially when little of no tooth structure has to be removed.” (4)

Cattell,M.J.., et al, has stated that the demand for more esthetic and biocompatible restorations has led to “a revival of all ceramic restorations—with

Cerinate taking the lead." (5) After a recent study by Peumans, et al, on 87 porcelain veneers placed on maxillary anterior teeth in 25 patients, 96% of the restorations did not need replacement after ten years. The authors concluded that "labial porcelain veneers represent a reliable, effective procedure for conservative treatment of unesthetic anterior teeth." (6) The authors concluded that porcelain veneers have proven to be very strong in vivo. If the preparation was located completely in enamel and correct adhesive procedures were followed and a suitable composite luting material was selected, then "an optimally bonded restoration was achieved." (7)

Bedi, R. states that: "In children porcelain veneers provide a simple means of splinting traumatized anterior teeth which have coronal fractures either for the immediate or the long term." (8)

As for gingival health following the fabrication and seating of the porcelain veneer, Peumans, et al, concluded that "the porcelain veneers had no adverse effects on gingival health in patients with optimal oral hygiene." (7) Walls, et al, stated that porcelain veneers "provide a conservative method of improving appearance or modifying contour, without resorting to a full coverage crown." (9)

Conclusion: The dental clinician usually has choices to offer the patient's parents based on his/her clinical judgement. As new materials and devices are introduced and proven to be evidenced based, it is our ethical and professional responsibility to offer clinically proven restorations to our patients and their parents. As Peumans, et al, concluded that the maintenance of esthetics of the porcelain veneers in long term was "excellent," and patient satisfaction was high." (7)

Case Histories

Case 1. A 19 year old male with Amelogenesis Imperfecta has decided to have cosmetic dentistry to improve his dental esthetics. Preparation of these teeth involved removing 1 to 1 ½ millimeters of enamel due to the thickness of the porcelain veneers that were fabricated by a dental laboratory. Figures 1, 2, and 3 shows the patient, R.P., prior to the preparation of the teeth:

Figure 1

Figure 2

Figure 3

Figure 4 shows the prepared teeth with conventional tooth preparation which the author has used for over 25 years.

Figure 4

Figure 5 shows the laboratory fabricate porcelain veneers ready for cementation:

Figure 5

Figure 6 shows the restored teeth with the veneers in place and cemented to the teeth:

Figure 6

Case 2: A 9 year old patient fell and hit a table while at school. The maxillary right central incisor had a Class I Ellis fracture of the enamel. Radiographs revealed no damage to the roots of the tooth. A composite “bandaid” was bonded over the exposed fractured area. (Figure 7) A composite veneer was placed six days after the injury. (Figure 8) Five months later the patient fractured the bonding on a toy. One month later the patient broke the bonding again hitting his brother’s head. Discussion with the mother included a choice of: no restoration at this time, rebonding the tooth with composite a third time, or a porcelain-to-metal crown. The mother decided on the crown. (Figure 9).

Figure 7

Figure 8

Figure 9

Case 3: A 15 year old female had recently completed her orthodontic treatment. She has a peg-shaped lateral of the maxillary right lateral incisor and microdontia and rotation of the maxillary left lateral incisor. (Figure 9)

Figure 10

After consultation with the patient and her father, the decision was made to fabricate no-preparation porcelain veneers (Lumineers by Den-Mat). Impressions were taken at the first visit and Figure 8 shows the Lumineers after cementation at the second visit. (Figure 11)

Figure 11

References

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