Porcelain laminate veneers – avoiding complications

By DCDM

Dental Veneering is the process of covering the facial surfaces of teeth by using various types of dental materials. Most commonly used are porcelain veneers which are thin shells of porcelain that are shaped like the outer layer of the teeth and are used to cover the teeth, aiming to enhance their appearance.

Many celebrities opt for this esthetic treatment to achieve what may seem like a picture-perfect smile. This may lead people to a false expectation that everyone is a good candidate for veneers. However, from a dental clinician’s perspective, preparing and planning for veneers is very challenging, and if proper analysis of the patient and proper techniques in preparing the teeth are not used, multiple complications may occur. These include gingival inflammation, chipping and breaking or even complete de-bonding of the veneers.

To decide whether a patient is a good candidate for veneers many factors should first be assessed; the condition of the patient’s teeth, habits, periodontal condition and most importantly the patient’s expectations and willingness to maintain their veneers after they are placed.

We should start by analysis of the teeth. This involves assessing their shape and proportion; diastemas, and analysis of the occlusion. Regarding shape and dimension, there should be sufficient tooth structure to retain the veneer, otherwise the longevity can be severely affected. In teeth with small surface areas such as lower incisors, or teeth with multiple cavities and fillings which decrease the available surface for bonding, there is an increased chance of the early displacement of the veneer. In such cases full crowns may offer a better long term option (H.Serdar Cotert et al, 2009).

In terms of diastemas, if these are too large veneers can only partly reduce the space, otherwise gingival inflammation and/or recession can occur due to the bulkiness of the veneer (Weissgold and Cohen, 1981). Additionally, a tooth which is unnaturally close to its antagonist may seem like a picture-perfect smile and patients with dark stained teeth are prepared for veneers by changing external contour, removing less than a millimetre of the facial surfaces and around 2 mm of the incisal edges, thus porcelain replaces the tooth structure removed, ensuring the porcelain is seated properly onto the tooth with enough bulk of porcelain at the edge to minimise chances of chipping and breaking. Studies have shown that the overall success and survival rate of the first method is much lower than the second method. The commonest complications with veneers are breaking and chipping (H.Serdar Cotert et al, 2009)(Layton and DPhill, 2013) (Akoglu et al, 2011).

A study analyzing the overall survival rate of porcelain veneers over a 20 year period concluded that the estimated survival rate over a 5 year period is at 95%, at 8 years is 94%; at 10 years is 86% and at 20 years is 85%. (Beier et al, 2012). It should be noted that these were veneers placed after adequate tooth preparation.

The clinician must consider all these factors before choosing to place veneers if complications are to be minimised and patient satisfaction achieved.

Figure 1. A significant staining of the veneer margins as a result of smoking and high coffee consumption.

References are available from the authors.

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