Egyptian Prosthodontic Association (EPA Newsletter)

Veneers as a tool for successful Esthetic Rehabilitation “3 keys of Success”

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Utilizing veneers to rehabilitate a smile, offers the advantages of conserving tooth structure, minimal or no postoperative hypersensitivity and proved long term Success. This requires understanding the parameters of the smile design to blend pink and white esthetics together with the nature of dental tissues to make a smile appear conforming with the frame of the lips and face.

3 Keys of minimal prep veneers success.

1- Guided Preparation Strategy

“Preserve the precious enamel”

Basically, the preparation amount for conventional veneers range from 0.3 mm to 0.7 mm in average (fig. 1) to provide proper veneer thickness in relation to function to achieve a long-term, predictable result for the patient. At this level enamel is preserved to provide stable and durable bond with tooth structure. Unlike dentin which has a complex structure and much moisture that decreases the bond strength and complicates the bonding procedures. [1]

Also, a mixture of enamel or dentin in the prepared surface could be present, but ensuring that at least 50 % of the surface is in enamel. [1]

Preparation also ensures the removal of “aprismatic enamel” layer which was proved to reduce the retention capability of veneers to tooth structure. [1]

Guided preparation using prep guides either by using mockup guided preparation (fig.2)[1] or digitally guided preparation (fig.3).[2] Mockup guided preparation is obtained from a waxing up fabricated either manually or digitally using the aesthetic pre-evaluative technique (APT) which ensures enamel preservation during preparation. Digitally fabricated prep depth guides were recently introduced and also provide more precise preparation amount [4].

In recent years laboratory techniques have evolved to produce ultrathin ceramic veneers, which has led to the category of “no prep” veneers to become popular. This type gives false impression of more technical ease of clinical steps, as its doesn’t require skill to prepare teeth. Also, it doesn’t require temporization and furthermore gingival retraction may not be required. However, clinical evidence show that minimal amount of gingival and proximal preparation is required to avoid unwanted over contouring (fig.4,5). [3]

TIPS FOR ESTHETIC REHABILITATION SUCCESS

“Failing to plan is planning to fail”

Benjamin Franklin

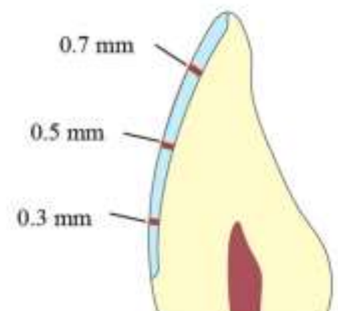

Fig.1 : Preparation amount for veneers.

Fig.2: Silicone index used for measurement of preparation amount.

2- Gingival Contours Preservation

“Think Pink”

Although thin restorations can appear sleek and natural, it is still paramount to design a restoration that facilitates proper cleaning at the gingival and interproximal margins. One of the advantages of a minimal preparation is that it allows for the margins of the restoration to be kept equigingival or, in certain circumstances, supragingival. The challenge for the dentist and the laboratory technician is in preventing the gingival margin of the restoration from becoming over contoured. If over contoured, the patient can experience gingival inflammation and hygiene issues. The same problem could exist interproximal in certain minimal preparation cases where the proximal contact remains intact. The restoration needs to be designed and fabricated in such a manner not to create overhanging porcelain that could prevent interproximal cleaning with floss or impinge upon the papilla (fig.6). [1]

3- Functional Requirements.

Minimal preparation veneers can be fabricated out of multiple types of ceramics either pressed or CAD/CAM ceramics. Veneers are placed under intense functional stresses of parafunctional activity inside the oral cavity, which should be taken in consideration either during case selection, preparation designing and fabrication stages of the minimal prep veneers. This can be achieved by preoperative occlusal analysis to determine the location and intensity of occlusal contacts. [1]

This shows the importance of proper diagnosis and case selection, as well as prep designing to ensure success and durability of the veneers in the oral cavity.

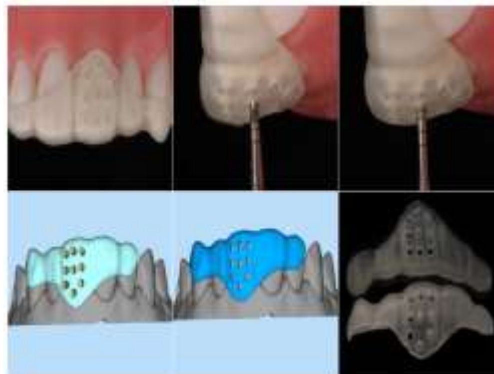

Fig.3: Digitally designed and 3d printed preparation guides for veneers.

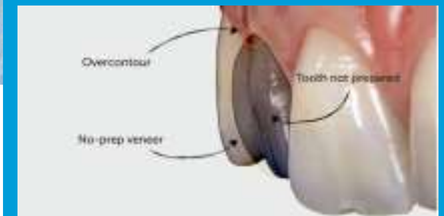

Fig.4 Over contouring in case of “no prep veneers”.

Fig.5 Minimally invasive veneers preparation with 0.3 mm gingival preparation.

Fig.6: Gingival health around veneers.

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