Eliminating sensitivity with a fluoride varnish: Duraflor Halo

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Dental sensitivity is one of the most common, yet often, one of the most difficult problems that we, as dentists, are required to treat and prevent. Our diagnostic task, first and foremost, is to ascertain the cause of the sensitivity. Is the underlying cause of the discomfort for the patient dental decay? Perhaps it is a leaky margin of an existing restoration? Or is it erosion or recession, either due to mechanical or chemical causes, such as, tooth brush abrasion or GERD, respectively? Or possibly just postoperative sensitivity? Once the cause of the dental sensitivity has been correctly determined, then treatment and prevention can proceed accordingly.

If a patient’s complaint is due to decay or a leaky margin, the solution is quite simple. Remove the old restoration and/or the decay as appropriate, and restore the tooth to healthy form and function. In many cases this process is enough to solve the problem. The solution, however, may not be so simple with other types of sensitivity.

For example, some of the situations cited above, such as erosion, recession and tooth brush abrasion can all be precursors to decay. However, they are likely to cause patient sensitivity well before they ever become a detectable carious lesion. In these situations, the best course of action is to treat the affected areas with some type of preventative approach that will stop the active process as well as eliminate the patient’s discomfort.

Fluoride varnishes have been available for many years. In fact, they have been used in Europe since the mid 1960s. In the United States, the Food and Drug Administration approved fluoride varnishes as desensitizing agents and cavity liners in the early 1990s. Fortunately for the dental practitioner, the application of varnishes requires no special equipment and can be easily administered chairside by the dentist or the auxiliary. There is also considerably less fluoride ingestion than with conventional in-office fluoride treatments using trays. This is particularly useful for younger patients who tend to swallow the fluoride. The fluoride, acting as a powerful emetic on their stomach contents, may cause them to vomit while still in the operatory (a rather messy situation for both the patient and the practitioner).

Patients can eat and drink immediately after the application of fluoride varnishes but should be warned that they may feel a “film-like” substance on their teeth for several hours after the application. Any remaining film that is still on the teeth will be easily removed when they brush and/or floss their teeth. Fluoride varnishes flow very readily, and this is a major clinical advantage; they can be applied to both smooth and non-smooth surfaces including pits, fissures, grooves, as well as interproximally.

One of the most important indications for fluoride varnishes is for children with poor oral hygiene. Fluoride varnish helps to prevent cavities and is totally controlled by the dentist or the auxiliary, requiring little or no patient compliance in order to have beneficial effects. One area that is often overlooked is the great value for those patients who are undergoing orthodontic treatments, those who are “regular” sugar-sweetened gum chewers, and for those patients who may be on medications that cause a decrease in salivary flow. In older individuals, where there is often a greater degree of gingival recession and therefore more exposed root surface, very often combined with decreased salivary flow, a fluoride varnish will go a long way to preventing sensitivity and reducing the incident of root decay.

For most cases, the application of fluoride varnish requires only a single visit and needs to be repeated twice per year, most readily in conjunction with routine recall care. The accepted recommendation is that the tooth surfaces be cleaned of debris, plaque, etc., prior to application so that the varnish can best adhere to the dental surfaces.

Duraflor Halo (Medicom, Montre-al, Quebec) is an excellent solution to delivering fluoride to tooth surfaces predictably at all age levels and in all patient groups (Fig. 1). Duraflor Halo White is a five percent sodium fluoride varnish.

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ride gel that is quite thixotropic yet easily dispensed onto the tooth surface. The package contains an applicator brush and a detachable cup that fits nicely into a prophyl paste ring so that the gel is conveniently located where it can accessed, close to the area(s) being treated. Duraflor Halo White 5% Sodium Fluoride Varnish is available in either spearmint or wild berry flavors, and is sweetened with xylitol, a progressive sweetener, which helps to prevent decay.

Duraflor Halo White 5% Sodium Fluoride Varnish has an added benefit in that it is white in color, eliminating the objection that some individuals had to fluoride treatment. Many other varnish products left a yellowish appearance on tooth surfaces. The concern for color is particularly important as many patients have undergone, or are considering having, whitening procedures. Such procedures are often accompanied by a transient sensitivity and Duraflor Halo White is an excellent product that can be used to combat such sensitivity without causing concerns to patients color sensitivities. In today’s climate of caries prevention and minimal intervention restorative procedures, Duraflor Halo White is an excellent product that focuses on the patient’s remineralization and desensitization needs as well as the conservative and clinical goals of the dental practitioner.

The clinical technique is quite straightforward. When the patient presents (Fig. 2), a prophylaxis and scaling is done first to eliminate all stain, plaque and tartar from the tooth surfaces. Once the prophylaxis is complete and the teeth are relatively plaque and tartar free, then they are ready for the application of the Duraflor Halo White 5% Sodium Fluoride Varnish (Fig. 5). The applicator brush that is included with the individual varnish dispensers is used to mix the varnish and apply it directly to the tooth surfaces (Figs. 4, 5). For application in orthodontic cases, the varnish is applied all around the brackets (Fig. 6).

All the teeth are covered in sequence with the Duraflor Halo White Varnish, a process that should not take more than 15 seconds per arch (Fig. 7). Once the varnish is on the teeth (Fig. 8), the patient is ready to leave the office and resume normal activities, including eating and drinking, although ideally, these are to be avoided for 30–60 minutes.

As evident in the photo (Fig. 8), Duraflor Halo White provides no yellowish appearance to the teeth. This avoids creating an esthetic liability where the patient is in a rush to eliminate the varnish from the tooth surfaces. Because the fluoride varnish is able to release more fluoride over a period of several hours, the longer the varnish stays on the teeth, the more effective it is for desensitization and remineralization.

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