Managing Sensitivity in Patients with Gum Problems

Managing Dentin Hypersensitivity in Periodontal Patients

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Management of Tooth Sensitivity in a Periodontal Specialty Clinic

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Dentin hypersensitivity (DHS) has been defined as a short, sharp pain arising from exposed dentin in response to stimuli - typically thermal, evaporative, tactile, osmotic or chemical - which cannot be ascribed to any other dental defect or disease.¹

**Why is DHS a concern for the periodontal patient and the dentist?**

DHS is an increasing oral health condition as it appears to affect up to 57% of dental patients while significantly increased in periodontal patients affecting 60 to 98% of them.²,³,⁴,⁵ The prevalence of DHS one day after non-surgical and surgical periodontal treatment can go up to 90% and 80.4%, respectively.⁴

**How can DHS be managed in periodontal patients?**

As in any patient case, the first step is to actively ask the patient for any symptoms of DHS and let him/her describe the pain in his/her own words, followed by a review of the medical and dental history and dietary habits. The next step is clinical examination to:

a) exclude other causes (e.g. pulpitis, caries, cracked tooth syndrome, fractured restorations, gingival inflammation etc)

b) identify underlying and predisposing factors

c) assess sensitive sites and severity of DHS.

Once periodontal disease or periodontal treatment has been identified as the cause of DHS, a two-component treatment and prevention plan addressing periodontal health and sensitivity should be implemented. The periodontal health management includes patient education (e.g. motivation for rigorous oral hygiene practices, smoking cessation) and, usually, at the initial phase scaling and root planing (SRP), which can be followed by surgical therapy if needed. DHS should be managed both in office with application of desensitizing treatments such as the Colgate Sensitive Pro-Relief desensitizing paste, and at home with desensitizing oral care products such as the Colgate Sensitive Pro-Relief toothpaste for immediate* and lasting relief, and the Colgate Sensitive Pro-Relief toothbrush. The application of desensitizing products prior to, during and after treatment, would be beneficial for patients with a previous history of discomfort during dental visits. A recently published study conducted in Greece has shown that Colgate Sensitive Pro Relief® desensitising paste immediately reduced hypersensitivity pain in periodontitis patients when applied after scaling and root planing, and this pain relief is maintained for 6 weeks.⁵

**Managing Dentin Hypersensitivity in Periodontal Patients**

DHS affects up to 98% of periodontal patients. Management of DHS can help in smooth periodontal procedures in the office and with patient compliance at home. Desensitizing treatments involving products such as Colgate Sensitive Pro-Relief desensitizing paste for in-office treatment and Colgate Sensitive Pro-Relief toothpaste can provide immediate* and lasting relief from DHS pain.
What are the benefits of DHS management in periodontal patients?

The effective management of DHS can make periodontal treatment procedures less uncomfortable and stressful for the patients and prevent missing or avoiding appointments. It may also increase patient compliance by reducing the DHS pain that patients may experience when brushing and flossing, therefore the patients can practice effective plaque control measures at home following periodontal treatment.

Overall, patient satisfaction can be improved and lead in a successful co-operation with the dentist to address oral health problems.

Key messages

DHS affects up to 98% of periodontal patients. Management of DHS can help in smooth periodontal procedures in the office and with patient compliance at home. Desensitizing treatments involving products such as Colgate Sensitive Pro-Relief desensitizing paste for in-office treatment and Colgate Sensitive Pro-Relief toothpaste can provide immediate* and lasting relief from DHS pain.

*When the toothpaste is directly applied with the fingertip on each sensitive tooth for 1 minute.

References:
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Dentin Hypersensitivity in Periodontal Specialty Clinic

It has been shown that dentin hypersensitivity problem is a more common finding within a periodontal specialty clinic, as a result of periodontal disease and its treatments, which may increase the occurrence of hypersensitivity.

To begin the cause-related treatment, initially mechanical debridement will be done to remove plaque and calculus leading to inevitable removal of cementum on the root surfaces resulting in the exposure of the dentin causing hypersensitivity.

The repeated instrumentation of a periodontally-involved teeth can lead to an extreme degree of sensitivity and the severity could affect patient comfort and interfere the patient’s daily plaque control practice.2,3

In a systemic review of the prevalence of root sensitivity following periodontal therapy,4 the prevalence of root sensitivity was lower (9-23%) before and higher (54-55%) after periodontal therapy.

Desensitizing Prophylaxis Paste

Polishing and prophylaxis using a prophylaxis paste or pumice to polish the teeth or root surfaces is a common practice after scaling and debridement. A hygienist will also do the rubber cup prophylaxis at the routine maintenance appointment. So it is convenient, easy to apply and cost effective to include a desensitize agent during the prophylaxis to help reduce dentin hypersensitivity.

In 2002, Kleinberg et al.5 had reported the development of a new anti-sensitivity technology based on the role that saliva plays in maintaining the patient plaque control and healthy dietary habit may each be important in achieving lasting comfort. Dentin hypersensitivity is a quality of life issue. Taking better care of patients with dentin hypersensitivity using clinically proven, effective, state-of-the-art treatment products is both appropriate and responsible.

11 To maximize the effect of desensitization, to carefully burnish this desensitizing paste into all sensitive areas, focusing on the CEJ and exposed cementum and dentin. Also to avoid rinsing immediately after application to enhance clinical efficacy.

7,8 The Pro-Argin™ technology mentioned has also been employed in desensitizing toothpaste.13 Use of a finger-tip topical self-application of this 8.0% arginine-calcium carbonate desensitizing paste 6, it resulted in immediate relief with a single treatment. 8.0% arginine-calcium carbonate desensitizing paste contains a biomimetic calcium carbonate, positively charged at physiological pH 6.5-7.5, bicarbonate, a pH buffer, and calcium carbonate, as a source of calcium. This technology, called Pro-Argin™, has been shown to physically plug and

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seal exposed dentin tubules and provides immediate relief of dentin hypersensitivity, compared with traditional pumice-based prophylaxis paste, it resulted in immediate relief with a single application and could last for up to 28 days.2

The Team Approach in Management of Dentin Hypersensitivity

A team approach of management co-working with the hygienist, may have an advantage in terms of obtaining better patient’s motivation, treatment efficacy and maintenance towards oral health.

Maintaining the patient plaque control and achieving good oral hygiene measures prior to commencement of non-surgical periodontal therapy have been shown to decrease root dentin sensitivity.6

During the mechanical debridement, over-instrumentation of the root cementum should be avoided10 and postoperative instructions to avoid drink or food with extreme temperature should be emphasized to the patient.

A rubber cup prophylaxis with a Pro-Argin™ based desensitizing paste has been clinically proven to be effective in reducing dentin hypersensitivity.4 A clinical study of a group of patients in an university dental hospital in Hong Kong showed that use of an in-office paste containing the Pro-Argin™ technology significantly reduced the severity of pain on patients with dentin hypersensitivity.5 Paste can also be applied to accessible spots by massaging thoroughly with a cotton-tipped applicator and to furcations and other hard-to-reach areas with a microbrush. The dental professional should carefully burnish this desensitizing paste into all sensitive areas, focusing on the CEJ and exposed cementum and dentin. Also to avoid rinse immediately after application to enhance clinical efficacy.11 To maximize the effect of desensitization, one may also consider the application of a fluoride varnish (Duraphat, 5% Sodium Fluoride).12

Home Care with Desensitizing Toothpaste

The Pro-Argin™ technology mentioned has also been employed in desensitizing toothpaste.13 Use of a finger-tip topical self-application of this 8.0% arginine-calcium carbonate toothpaste directly onto the hypensensitive surface of teeth provides an immediate improvement and the daily use of this toothpaste as home care could sustain the improvement. Evidence has shown that this Pro-Argin™ technology employed in desensitizing toothpaste provides a better and significant immediate improvement when compared to a control toothpaste and to the traditional potassium-based desensitizing toothpaste.14

Long-term management of dentin hypersensitivity

Treatment of dentin hypersensitivity with a product, such as the arginine-calcium carbonate desensitizing paste, is only one aspect of the management of dentin hypersensitivity. Regular dental check up and professional prophylaxis with your dentist or hygienist, maintain good daily oral hygiene practice and healthy dietary habit may each be important in achieving lasting comfort. Dentin hypersensitivity is a quality of life issue. Taking better care of patients with dentin hypersensitivity using clinically proven, effective, state-of-the art treatment products is both appropriate and responsible.15

References: