Short Communication

Knotted Floss Technique

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Abstract

Whenever a patient finds gingival embrasures that are too wide for use of a regular dental floss and too thin for insertion of an interdental brush, a dental floss can be modified by tying a simple knot on it and using the knotted area for hygiene of such wide Type-I gingival embrasure.

Keywords: Dental floss, Embrasures, Oral hygiene.

Introduction

In spite of a better understanding of the role of microorganisms in plaque-associated gingivitis, a scientific basis for intercepting the development of gingival inflammation by targeting specific microorganisms has not yet emerged. Therefore, in preventing and treating plaque-associated gingivitis in the majority of patients, we currently have to rely on a non-specific model, aiming for regular plaque removal and elimination of plaque retaining factors.

Tooth brushing may be effective in removing plaque on buccal and lingual surfaces, but it will not reach interdental plaque. To accomplish this, there are available a number of other oral hygiene devices. These include dental floss or tape, interdental brushes and tooth picks.

Choice of these interdental aids in particular areas depends upon the manual dexterity of the patient, as well as upon the type of interdental embrasure. Perry has classified interdental embrasures, depending upon the filling of the gingival embrasure by the interdental papilla. Hence, in Type-I, floss is used, and in Types-II and III the incrementally wider proxybrush and unitufted brushes are used respectively.

Many clinical patients have complained that there are gingival embrasures which are too wide for effective use of dental floss, and too narrow for proper atraumatic use of proxabrush. Patients complain of these embrasures when a tooth with substantial cervical constriction like molars, has tipped mesially, or chronic food impaction has caused minor distal movement of the distal tooth and slight mesial adjustment of the mesial tooth. Perry has recommended that coronoplasty accompanied with restorative therapy should be utilized to correct the wrong contours of the tooth and treat food impaction. Recurrence of food impaction is noticed especially during chewing of fibrous (non-vegetarian) food and thus a source of major discomfort to the patient.

Such food lodgment in the confines of the embrasure can lead to gingival/pertiodontal inflammation in its vicinity and its deleterious outcomes. Patients usually resort to use of toothpicks for effective removal of tightly lodged (impacted) food as dental floss and proxabrush are ineffective for their respective reasons, i.e., the former is too small and the latter is too wide for effective removal. Commonly, the patient complains that a dental floss is unable to fully engage and remove all of the food lodged in-between such wide Type-1 embrasures. Moreover, wrong angulation of toothpick with respect to the gingival margin can lead to gingival trauma. A dental yarn and a powered flossing device may be useful in such conditions, but these aids are not so easily available across many provinces of developing countries.

The dental floss can be made effective to clean such wide Type-1 embrasures by tying a knot on the dental floss of 12-18 inch length.

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The increased cross-sectional width of the floss at the knot will be sufficient to dislodge the food entrapped, resulting in an effective plaque control. The floss will easily go across the contact points in the unknotted area (Fig. 1_top) while the knotted area can easily engage and dislodge the food that has got stuck in the wider Type-1 embrasure. (Fig. 1_middle and bottom). A different section of the floss is used in different areas of the mouth and similarly a new knot created and used if a second wide Type-1 embrasure exists, hence, an easy alternative to “tooth picking”.

The dental therapist should monitor the areas which have been prescribed for the knotted floss technique at regular frequency of 3-4 months, so that overzealous flossing may not cause dental abrasion, gingival grooving, or gingival col ablation. An over eagerness by the patient to remove the food lodged may result in such disadvantages, which may be evident with any other interdental cleansing aid used.

Further, longitudinal studies are recommended for documenting the usefulness, patient acceptability and disadvantages of this technique. A knotted floss technique can be a useful and effective aid in hygiene maintenance in wide Type-1 gingival embrasures.

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References

