Gingival recession is a common finding among patients and can lead to esthetic concerns and thermal sensitivity. Among the most common etiologies are mechanical trauma from brushing and flossing in combination with a thin gingival biotype susceptible to recession. Occlusal trauma and frenum pull are considered cofactors in the recession process.

Various soft tissue grafting techniques have been developed to address this problem and have mostly included the transplantation of autogenous tissue in combination with a coronally advanced flap. Other techniques included pedicle flaps, guided tissue regeneration, and the use of allograft materials.

Advances in technology have improved the predictability of root coverage procedures. Treatment with enamel matrix proteins in conjunction with a coronally advanced flap (CAF) has been shown to be an effective treatment modality with reduced morbidity for patients.1,3 Enamel matrix proteins have been clinically observed to enhance wound healing1 and promote regeneration of periodontal tissues on previously denuded root surfaces.2 The technique also allows clinicians to treat up to a full arch of multiple recession lesions in one appointment and obtain predictable results.3 This procedure may be more effective when mobilizing tissues that are of adequate quality with a minimal amount of keratinized tissue, emphasizing the importance of case selection. If the tissue quality is not adequate, alternative treatment options should be considered, such as the addition of an autogenous subepithelial connective tissue graft (SCTG).

The following case report demonstrates the use of a coronally advanced flap with a subepithelial connective tissue graft and enamel matrix proteins (Straumann Emdogain).

Case Report
A healthy 28-year-old female patient presented with chief complaints of root exposure and sensitivity to thermal change in specific maxillary teeth. The patient had previous history of orthodontic treatment.

Straumann® Emdogain™ application in conjunction with subepithelial connective tissue grafting was planned to treat the patient’s gingival recession (Miller Class I) of approximately 4.0 – 7.0 mm at teeth #13, 14, 23 and 24 (FDI).

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The correction of gingival defects was accomplished over two surgical visits, with teeth #13 and 14 addressed first.

Split-thickness flaps were raised at the affected areas after administration of local anesthetic. The roots of the teeth were thoroughly planed under irrigation using an ultrasonic instrument. Emdogain was applied to the recipient sites, followed by the connective tissue grafts. The grafts were then covered with a thin layer of Emdogain. The split-thickness flaps were advanced coronally and superficially to the grafts. Chromic gut sutures (4-0 gauge) were used to secure both flaps and grafts. The flaps were secured coronally at the level of the interdental papillae.

The patient was instructed to use chlorhexidine rinse for a period of one week post-operative. The patient was monitored at three weeks, two months, and four months post-operative.

Fig. 9 A CAF with Emdogain application and SCTG was implemented

Fig. 10 Postoperative healing at 4 months

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Fig. 5 Closure of the harvest site in the palate. The graft was harvested to provide sufficient marginal width.

Fig. 6 The split-thickness flap was coronally advanced and secured. The grafts were simultaneously secured in the same process.

Fig. 7 Clinical presentation at 4 months illustrates correction of the defects at teeth #13 and #14. The patient no longer reports sensitivity to thermal change.

Fig. 8 The defects at teeth #23 and #24 presented in similar fashion to those of the contralateral side.

References

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