HOW TO

TREAT GINGIVAL RECESSON

Extensive one-appointment treatment using Emdogain enamel matrix proteins.

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Information provided by Straumann USA.

The following case report demonstrates the treatment of multiple recession lesions in one appointment using a coronally repositioned flap with a subepithelial connective tissue graft and Emdogain enamel matrix proteins.

A 38-year-old healthy female patient, presented with a chief complaint of dissatisfaction from the appearance of her smile due to multiple apparent gingival recession lesions. She recently completed orthodontic treatment and noticed an increase in recession over the 2-year treatment period. Upon examination, generalized recession ranging from 1 mm to 4 mm was observed (Figs. 1-2). The tissue was of good quality with adequate attached and keratinized gingivae, with the exception of tooth #6. A root coverage procedure was discussed with the patient and informed consent was obtained.

The treatment plan included a coronally repositioned flap in conjunction with the application of Emdogain enamel matrix proteins from tooth No. 4 all the way across the midline to No. 13. Due to the thin tissue on the buccal aspect of No. 6, the simultaneous harvest and placement of an autogenous subepithelial connective graft was recommended for this specific site.

The patient was anesthetized using Lidocaine 2% with 1:100,000 epinephrine via buccal and palatal infiltration. An intrasulcular incision was made on the buccal surface of the involved teeth. The incisions were connected via a split-thickness incision from line angle to line angle at the CEJ level of each tooth (Fig. 3).

Once the incision line was completed, a partial-thickness flap was elevated beyond the mucogingival junction. Care was taken to not perforate the buccal flap during the sharp dissection. Any perforation could compromise the blood supply and risk the success of the procedure.

The denuded root surfaces were debrided with hand instruments to ensure the principle of a “receptive root.”

Periosteal release was performed from the inner aspect of the flap to allow for the coronal advancement of the flap.

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The papillae were de-epithelialized to create a vascular surface for tissue incorporation. The flap was then mobilized coronally with tissue forceps to verify a tension-free eventual closure.

At that point, the subepithelial connective tissue graft was harvested from the palatal aspect of tooth Nos. 3, 4, and 5. The graft was placed on a cold surface and adjusted to fit the No. 6 recession site (Fig. 4).

Chemical root preparation followed thereafter with Pre-FGel® (24% EDTA) and was irrigated with sterile saline.

Emdogain was then applied to all exposed root surfaces (Figs. 5 and 6) and the subepithelial connective tissue graft was sutured to the interproximal papillae of tooth #6 (Fig. 7).

Additional Emdogain was applied on all other root surfaces of tooth No. 4 to No. 13, and the flap was coronally positioned using 5/0 Vicryl sutures (Fig. 8).

Verification of tissue stability was done by lightly pulling on the lip and making sure that there was no movement on the marginal gingival tissue.

Additional Emdogain was applied on the gingival margin and the sutures.

Follow-up

Post-operative instructions were given to the patient. A medication regimen of systemic antibiotics (Amoxicillin 500 mg TID for one week) and non-steroidal anti-inflammatory medication (Ibuprofen 600 mg to be used as needed for pain) was recommended to the patient. The healing was uneventful, and the sutures were removed two weeks after the surgery. Specific home care instructions were given to the patient to prevent any trauma to the surgical site in the first 6-8 weeks of healing. These included an atraumatic brushing technique and the patient was instructed to resume gentle flossing three weeks post-operatively. In this case, 3-month follow up showed excellent healing with almost 100% root coverage on all treated teeth and the patient expressed satisfaction from the final result (Figs. 9-10).

This case report demonstrates treatment of multiple recession lesions in one appointment using the coronally positioned flap with a connective tissue graft and Straumann Emdogain. The procedure was shown to be effective in achieving root coverage, with minimal morbidity for the patient and an excellent esthetic outcome.