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Gingival Recession

Gingival Recession (GR) is defined as an apical drift of the gingival margin (GM) from its physiological position, 1 to 2 mm coronal to the cemento-enamel junction (CEJ), leading to pathologic exposure of the root surface. Patients often complain of thermal hypersensitivity, especially to cold, in teeth with GR. In addition this may make it difficult for the patient to perform correct oral hygiene. Unless there are strong aesthetic demands concerning excessive tooth length, the least invasive treatment is local application of desensitizing agents. When the patient's complaint includes both hypersensitivity and excessive length of the teeth, the treatment should be mucogingival surgery (MGS).

A case of a healthy 29 year old male presented with Class-I Miller GR defect affecting the maxillary right canine (13), bicuspids (14, 15) and first molar (16). The patient complains of the excessive length of the teeth and the hypersensitivity issues. Patients with GR are often motivated and know the importance of oral hygiene to an extent that they damage their gingiva as a result of excessive brushing and/or incorrect flossing.

When several GR defects exist on adjacent teeth, the choice of surgical technique requires an assessment of local anatomical conditions for each defect. With favourable anatomical conditions a coronally advanced flap (CAF) is the treatment of choice; however when CAF can't provide root coverage due to absent or inadequate keratinized tissue (KT) apical to the root exposure, a sub-epithelium connective tissue graft is added (SCTG) and covered by the CAF. In this case a four adjacent GR defects, three of which can be corrected with CAF (teeth 13, 15, 16), whilst the other defect (tooth 14) requires the addition of SCTG (Bilaminar Technique) due to the lack of KT apical to the defect and the mobility of the GM as a result of high frenal pull (FP).

Under local anesthesia the surgical technique started with horizontal incisions made at the base of the inter-dental papilla (IDP) of the teeth 13, 14, 15 and 16. Then, two vertical incisions are made, the first one at the mesiolabial line angle of tooth 13, and the second one at the

distobuccal line angle of tooth 16. These incisions diverging slightly as they extend as far as the alveolar mucosa (AM). The flap then is raised in a split-thickness manner. To free the flap for coronal repositioning, the superficial muscle fibres are cut. The exposed root surfaces were manually debrided with micro-curettes to eliminate microbial deposit and leaving a smooth hard surface conducive to soft tissue attachment. This will be followed with the conditioning of the exposed root surfaces with EDTA for 2 minutes. EDTA will remove the smear layer and enhance the adhesion of blood clot to the root surface, which is a very important step in periodontal healing.

Only tooth 14 received SCTG which was harvested from the hard palate and secured with two interrupted sutures on tooth 14. The absence of deep abrasion defects and the presence of adequate KT over the 13, 15 and 16 indicate the feasibility of CAF for root coverage alone. The flap is advanced coronally to cover the GR defects on teeth 13, 15, 16 and the SCTG on tooth 14 completely. It's then secured with a series of interrupted sutures along the releasing incisions. Finally a sling suture is anchored behind the palatal aspect of the teeth with the GR. Post-operative advice was given regarding oral hygiene, pain management, correct post-surgical diet and general care to reduce risk of bleeding or interfere with early stages of wound healing.

