REGENERATIVE THERAPY AND CORONALLY POSITIONED FLAP TECHNIQUE IN THE MANAGEMENT OF FIRST UPPER MOLAR FURCATION DEFECTS

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Clinical evaluation/ Diagnosis

The patient 26 years old, female, Maghreb, in good health condition, came at our attention because of tooth mobility, tooth migration and gingival bleeding. She reported a low stress level, negative familial aggregation for periodontitis and none previous periodontal treatments. She didn't smoke and she brushed her teeth with medium manual toothbrush 2 times a day. She was doing orthodontic treatment in Morocco for the tooth migration of second sextant. At baseline examination she presented high periodontal indexes (FMPS 94%, FMBS 72%) and severe periodontal probing depths localized on molars and elements 1.2, 2.2. The furcation of elements 1.7, 1.6, 2.6, 3.6, 4.6 and 4.7 were involved. The element 3.8 was impacted with a severe probing depth distal the element 3.7. According to Armitage 1999 the diagnosis was Localized Aggressive Periodontitis (Type III A)

Treatment goals

The treatment goals of the complete periodontal therapy were: control of the supra and sub gingival infection, FMPS/FMBS <20%, arrest of the progression of the periodontitis, bundle bone remineralization and radiographic presence of the lamina dura, furcations closure, reduction in probing depth and clinical attachment gain.

Description of clinical/surgical procedures

An envelope-type flap was made from the mesial buccal aspect of the 1.6 to the distal surface of the 1.7. A modified papilla preservation technique was used in the interproximal space of the vertical bony defect. The interdental tissue mesial the element 1.6 was dissected split-thickness up to the level of the buccal bone crest; the buccal gingival tissue was elevated full-thickness to expose 3mm of buccal bone, whereas the most apical portion of the flap was elevated split-thickness to facilitate the coronal displacement of the buccal flap in order to cover the furcation. After the removal of the granulation tissue, deproteinized bone replacement material mixed with Amelogenine was applied to overfill the defects. A tension-free primary closure of the interdental papilla upon the bony defect was achieved using a apical internal horizontal mattress suture and a coronal modified mattress suture. The vertical releasing incisions were closed with interrupted sutures.

Clinical outcomes

At 24 months of follow-up the patient has no more sites with PD ≥ 4 mm (Badersten et al. 1990; Claffey et al. 1990). Clinical attachment gain and complete closure of the furcation defects are registered. The periodontal indexes are under control: FMPS is 8% (Rosling et al. 1976; Axelsson & Lindhe 1981; Axelsson 2004; Eicholz 2008) and FMBS 8 % (Lang et al. 1990; Joss et al. 1994, Trombelli 2006). From the radiographic point of view we can appreciate the presence of lamina dura, the filling of vertical defects and the furcation. The patient has a high level of compliance. According to the periodontal risk assessment (Lang & Tonetti 2003) she has a medium level of risk and the suggested recall interval is every 6 months.