

Guided tissue regeneration in Severe Periodontally Compromised molars

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Clinical evaluation/ Diagnosis

A 77y old, non smoker, systemically healthy patient presented to our clinic with complaint of discomfort and difficulty in chewing, and bleeding on brushing. At the Baseline patient showed high percentage of full mouth plaque and bleeding score with widespread inflammation, bleeding, mobility and suppuration of tooth # 4.6. Tooth # 4.6 was non vital with deep probing pocket depth on the buccal side with Grade 2 furcation defect. The tooth # 3.6 had the same situation as on the right side except the tooth was vital. According to the new classification , the patient was diagnosed with a " Stage III Grade A, generalized periodontitis" based on the clinical parameters noted at the Baseline.

Treatment goals

In the first phase of the treatment the main of etiological treatment was to reduce the infectious burden in the oral cavity. Staged Scaling and root planing was carried out with meticulous oral Hygiene instructions and patient's progress was assessed on every single visit. Root Canal therapy was carried out for Endo-Perio lesion on tooth # 4.6. Occlusal analysis to eliminate possible trauma was performed and monitored throughout the duration of treatment. At the reevaluation of non-surgical therapy performed 8 weeks after the last session of SRP, the periodontal situation appeared to be significantly improved with reduction of all pathological periodontal indexes. Surgical therapy was subsequently planned, where deemed necessary, to decrease the risk of recurrence and progression of the disease.

Description of clinical/surgical procedures

Following RCT of #4.6 NST was continued for next six months. There was some clinical improvement in the soft tissue profile but the radiographic examination showed minimal improvement. The clinical parameters led us to go for GTR technique. Intrasulcular incision was performed with a releasing incision mesial to tooth #4.5. A full thickness mucoperiosteal flap was raised. Following the degranulation, the defect was presented with Class 2 Furcation defect with only lingual cortical plate intact. an intra-osseous component mainly of two walls that reached and exceeded the apex of the mesial. Given the low-containment nature and lack of the vestibular cortex, a combination of bio resorbable membrane and bone substitute (BioOss-Collagen) were used. An autogenous connective tissue graft was also used to improve the thickness and width of Keratinised tissue. 6.0 polysorb sutures were used to secure the membrane and flap was replaced with the help of simple sutures using 6.0 Goretex.

Clinical outcomes

From the last clinical and radiographic examination carried out at 12 months period, one can appreciate how regenerative therapy has brought about an improvement in all the parameters. Clinically, Probing pocket depth was reduced to normal with no pathological mobility of the tooth. Radiographically, the presence of radiopaque material within the defect is appreciable. After 3 months of healing Odontoplasty of the furcation area was performed to eliminate residual class I furcation defect. There was no significant improvement in terms of quality and quantity of the keratinized tissues but the clinically soft tissue margin was healthy with no signs of inflammation.