

Evaluation of Regenerative Treatment on Repairing the Destructed Periodontal Support in Diabetic Patients

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Abstract

The present study was performed on 40 adult male patients 20 (NIDDM) diabetics and 20 non-diabetics. Their ages ranged between 45-55 years. All selected patients were suffering from advanced periodontitis with at least two sites of infra-bony defects ≥ 6 mm. All patients were subjected to periodontal regenerative surgery. Each patient had two surgical procedures in two different sites. One site acts as control site, while the other site acts as experimental site. Open flap debridement will be performed to each defect site. In experimental sites, the infra bony defects were filled with bone grafting materials (Aligpore Hydroxy apatite) mixing with tetracycline solution, while the control sites were only surgically debrided. On both sides the flaps were sutured and periodontal packs were placed. Clinical and radiographical evaluations were performed to all sites pre surgically and 6 months post-surgically. Pocket depth "P.D"- attachment level "AL" and standardized periapical radiographs. Digital computer image analysis was done to X-ray films to detect the percentage change in bone density before and after surgery to both control and experimental sites. The results obtained from the study demonstrated a significant improvement in all clinical parameters in non-diabetics in both sites (experimental & control) $-p < 0.01$, while in diabetic group only "P.D" showed a significant reduction in both sites $p < 0.001$. while "AL" showed significant improvement only in experimental sites $p < 0.01$. Digital analysis of the radiographs demonstrated five folds increase in bone density in bony defects in non-diabetics and nearly three folds increase in density in bony defects in diabetics. This promising result indicates that deep bony defects around the roots of diabetics can be managed and many diabetic teeth may be survived rather than extracted.