

**ASSESSMENT OF THE USE OF GA-AL-AS DIODE
LASER IN THE MANAGEMENT OF INTRAOSSEOUS
PERIODONTAL DEFECTS RECEIVING
DEMINERALIZED FREEZE-DRIED BONE
ALLOGRAFT**

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Abstract

In the present study, fourteen patients (5 males and 9 females). Their age ranged from 38 to 53 (mean age was 43.8 years). They were chosen as having nearly similar defects, such that twenty eight infrabony defects were selected. Four weeks, after defect debridement, the selected defects were reevaluated and measured such that only defects with pocket depth measuring =5mm were included in this study. The twenty eight defects were divided into four groups, the first group has open flap debridement only, the second group has open flap debridement then soft laser irradiation, the third group received (DFDBA) after open flap debridement while the last group has combined therapy using both (DFDBA) and soft laser irradiation following the same surgical step.

Pocket depth and clinical attachment level were measured while alveolar bone level and bone density were radio graphically evaluated at baseline and six months postoperatively. Statistical analysis of these recorded measurements revealed that there were significant reduction in pocket depth, gain in clinical attachment level, alveolar bone level and bone density, in all the treated groups. Moreover, at six months Combined (demineralized freeze dried bone allograft and low level laser therapy) showed better reduction in pocket depth (48.8 % \pm 16.3) and greater gain in clinical attachment level (52.2 % \pm 17.6) compared to other treatment modalities. Furthermore it revealed the best improvement in alveolar bone level percentage (19.57% \pm 9.22) and increase in bone density (47.21% \pm 22.15) compared to other treatment modalities.