

**EVALUATION OF DEMINERALIZED FREEZE-DRIED  
LAMINAR BONE IN TREATING CERTAIN  
PERIODONTAL DEFECTS  
(A CLINICAL STUDY)**

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Teeth are supported primarily by the attachment of periodontal ligament on one side and alveolar bone on the other. During the destructive periods of periodontitis the connective tissue attachment of the tooth to the bone is reduced and the alveolar bone is resorbed. It has long been an objective of periodontal treatment to reverse this process and to replace these missing tissues<sup>73</sup>.

The ultimate goal of periodontal therapy is the restoration of lost supporting tissues including new bone formation and new connective tissue attachment to the tooth at the most coronal level. Conventional periodontal treatment does not achieve this aim and is limited to arresting the progress of the disease. Several methods have demonstrated varying degrees of success in reaching this goal. At present the most consistent success in the regenerative treatment of osseous defects is obtained with periodontal flap surgery and bone grafting<sup>75</sup>.

It is generally believed that bone autografts are superior to bone allografts in osteogenic potential, furthermore there may be differences in bone induction potential among various types of autograft and allograft preparations. Autogenous osseous coagulum, bone blend, freeze-dried bone allografts and decalcified freeze-dried bone allografts have all been shown to have potential as graft material in periodontal osseous defects<sup>20,36,60</sup>.

Periodontists have been searching for the ideal bone implant material for over two decades. Autologous bone implants are considered to be the gold standard. This past decade, there has been tremendous interest in the use of demineralized freeze-dried bone as an implant material due to its availability, safety, osteoconductive and osteoinductive properties<sup>4</sup>.

The osteogenic potential of demineralized freeze-dried bone allografts has