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Use of Spongius Bone Chips and Fascia Temporalis in Alveolar Bone Defects

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Abstract: Graft materials are used for inducement of regeneration in bone defects. Organic and synthetic bone graft materials facilitate remodeling or healing of the bone and induce new bone formation in the area of bone resorption caused by pathological, traumatic, and physiological reasons. The aim of this study was to evaluate the effects of spongius allogenic bone graft and fascia temporalis membranous collagen tissue on the healing of bone defects clinically and radiologically. The study was carried out on 90 bone defects of 81 patients who underwent apicoectomy, cystectomy, and curettage of chronic infections in the maxilla and mandible. Defects were divided into 3 groups with respect to the way they were treated before soft tissue flap closure: with bone chips alone (D1), with bone chips and fascia temporalis (D2), and with no treatment (D3). Clinical and radiological examinations were carried out 1, 3, 6, and 12 months after surgery. Complications were observed in 5 defects in D1, 4 defects in D2, and 5 defects in D3. All defects ameliorated after treatment of the complications. All 3 groups showed similar complication rates after surgery. Spongius bone chips either alone or covered with fascia temporalis reduced the overall osteogenesis period and prevented collapse of the mucosal soft tissue into the defect when compared with the controls.

Key Words: Spongius bone chips, fascia temporalis, allograft, mandible, maxilla

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