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Clinical and radiological evaluation of human mandibular grade-II furcation defects treated with calcium sulphate alpha hemihydrate and autologous human saliva and a synthetic osteoconductive non-ceramic hydroxyapatite (osteogen)

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OBJECTIVES

Periodontitis is characterized by resorption of alveolar bone as well as loss of soft tissue attachment to the tooth. Furcal invasion presents a serious complication of periodontitis and accounts for majority of tooth loss in the posterior segments. Regenerative surgery using bone grafts is one of the mainstays of the treatment; the cost of which is huge. The present experiment aims at using a unique treatment modality to dramatically reduce the financial burden without compromising the quality.

METHODS

The patients for the above mentioned study were selected from the OPD of the department of Dental Research, INMAS, DRDO, Delhi. Both males and females were included in the study; age group ranged between 35-45 years. A detailed medical history of each patient was recorded and any patient with a medical condition that would contraindicate routine periodontal surgery were excluded. A detailed bilingual consent form was generated, which was thoroughly explained to the patient before the surgical intervention, and due consent of the patient taken.

RESULTS

All the subjects exhibited very good compliance and the healing period was satisfactory for both the groups, there were no signs of infection or complications indicating the bio-compatibility of the test material. The reduction in the horizontal probing depth from baseline to 06 months by Friedman Test for group-I was, $p < 0.001$ Friedman Test Statistic = 15.000; Kendall Coefficient of Concordance = 1.000 which was highly significant; similarly for group-II, $p < 0.001$, Friedman Test statistic = 15.000; Kendall Coefficient of Concordance = 1.000, which was also highly significant. These statistical analyses clearly showed that the test material was equally effective in the successful management of furcal invasion.

RECOMMENDATIONS

It is recommended that the test material as used in the study be employed to treat mandibular grade-II furctation defects in our dental centres by Periodontists as a multicentric study. Further designing of the drug (test material) should be undertaken to improve its predictability. This cost effective technique should benefit the rural populace as well and therefore collaborative studies with civilian counterparts should be undertaken.