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## Alveolar Bone Loss on Abutment and Non-Abutment Teeth as Related to Removable Partial Denture Wearing. A Six Month Follow up Study

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Loss of interdental alveolar bony septum can be determined directly from a radiograph as a percentage length of the interdental bony crest of the alveolus to the distance from cemento-enamel junction of the tooth to the tooth apex. The aim of this study was to measure the height of interdental alveolar bone around the abutment and non-abutment teeth in removable partial denture wearers (RPD) on dental panoramic radiographs (DPR) through a period of six months. Twenty RPD patients (5 males, 15 females) participated in the study. The alveolar bone loss measurement was performed on DPRs, using Shei index, on each mandibular abutment and non-abutment tooth on its mesial and distal side, after the RPD delivery and six months later. Recordings of plaque index (PII) were made at the mid-buccal, mid-palatal, mesio- and disto-palatal surfaces of each abutment and non-abutment teeth after the RPD delivery and six months later. The results revealed a decrease of Shei index values on both abutment and non-abutment teeth, which reached a statistically significant level for distal Shei index values of the abutment teeth and mesial and distal Shei index values of the non-abutment teeth ( $p < 0.05$ ) in a 6 month period. There was no statistically significant difference in PII values between the first and the second measurement ( $p > 0.05$ ). We concluded that the decrease in bone support on both abutment and non-abutment teeth was attributed to the high levels of PII and low level of oral hygiene than to RPD loading.

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## The Relationship Between the Density of the Mandible and That of Post-Cranial Bone in Postmenopausal Women

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Skeletal mass declines in all populations with age, and it is suggested that changes in oral bone may be linked to the status of the postcranial skeleton. Systemic loss of bone density leading to osteoporosis has also been suspected as a systemic risk factor for oral bone loss.

The purpose of this study was to determine if the bone density of the mandible is related to the bone density of the spine and hip in postmenopausal women and if the mandibular density is declined with age and time of menopause and edentia. 52 edentulous postmenopausal women underwent assessment of postcranial and mandibular bone. BMD of the lumbar spine (L2-L4), the femoral neck (F) and the mandible (ramus M1, body M2) was determined by DEXA. Lower BMD M1 was found in osteopenic ( $n = 16$   $0.230 \pm 0.31$   $\text{g/cm}^2$   $p < 0.1$ ) and osteoporotic women ( $n = 21$   $0.240 \pm 0.37$   $\text{g/cm}^2$   $p < 0.1$ ) compared to healthy subjects ( $n = 15$   $0.450 \pm 0.59$   $\text{g/cm}^2$ ). The significant lowest value of BMD M2 was found in the osteoporotic group ( $0.720 \pm 0.59$   $p < 0.06$  and the osteopenic group of women ( $0.770 \pm 0.48$   $\text{g/cm}^2$   $p < 0.09$ ) compared to healthy subjects ( $1.140 \pm 0.7$   $\text{g/cm}^2$ ). Correlation analysis revealed significant relationships between the BMD M2 and BMD F ( $r = 0.330$   $p < 0.02$ ) and BMD L2-L4 ( $r = 0.242$   $p < 0.08$ ). BMD M1 was not significantly related to any other area. Age, the occurrence of menopause and the time of the edentia had significantly negative correlations with density of the mandibular body (BMD M2  $r = -0.349$   $p < 0.01$   $r = -0.286$   $p < 0.05$   $r = -0.235$   $p < 0.09$ ).

It is concluded that the density of the mandibular body is significantly related to the density of the hip and lumbar spine in postmenopausal women and the mandibular body density declines with age, the occurrence of menopause and the time of edentia.