

A-9. Osteoporotic condition in Postmenopausal patients with Periodontitis

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The purpose of this study was to evaluate the relationship between the osteoporotic condition and periodontal condition in postmenopausal women with periodontitis. Forty three female postmenopause patients with no systemic disease were divided into 3 groups by their periodontal conditions; 12 mild periodontitis, 11 moderate periodontitis, 20 advanced periodontitis. From each patient, age of menopause was taken, alkaline phosphatase(ALP) and osteocalcin in blood and deoxypyridinoline (DPD) in urine were measured. Bone mineral density(BMD) of lumbar spine(L2-L4) was measured by dual energy X-ray absorptiometry. Periodontal and osteoporotic parameters were compared among the groups and correlation coefficient between them were evaluated.

1. Blood ALP and osteocalcin level was similar among the groups with different periodontal condition, whereas the urine DPD and Bone mineral density(BMD) was significantly lower in advanced periodontitis group than the other groups($p < 0.01$).
2. Probing depth was negatively related with BMD($r = -0.5$, $p < 0.01$) and positively related with patient age and the duration of menopause($r = 0.32$ and 0.35 respectively, $p < 0.05$).
3. Clinical attachment loss was negatively related with BMD($r = -0.66$, $p < 0.01$), and positively related with urine DPD($r = 0.37$, $p < 0.05$).
4. In lower dentition, the probing depth was positively related with patient age and the duration of menopause($r = 0.37$ and 0.44 respectively, $p < 0.05$), whereas they were not related in upper dentition.
5. In lower dentition, the clinical attachment loss was positively related with the duration of menopause($r = 0.34$, $p < 0.05$), whereas they were not related in upper dentition.

These results showed that postmenopausal women with advanced periodontitis had significantly decreased bone mineral density and suggests that decreased bone mineral density in postmenopausal women could be associated with periodontal tissue breakdown.