

## The Study of Periodontal Health Status in Menopausal Women with Osteoporosis Referred to Rheumatology Clinics in Yazd and Healthy People

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**Abstract :** Introduction: Clinical studies on the effect of systemic conditions on periodontal diseases have shown that some systemic deficiencies may provide grounds for the onset of periodontal diseases. One of these systemic problems is osteoporosis, which may be a risk factor for the onset and exacerbation of periodontitis. This study tends to evaluate periodontal indices in osteoporotic menopausal women and compare them with healthy controls. Materials and Methods: In this case-control study, participants included 45-75-year-old menopausal women referred to rheumatology wards of the Khatamolanbia Clinic and Shahid Sadoughi Hospital in Yazd; Their bone density was determined by DEXA-scan and by imaging the femoral-lumbar bone. Thirty patients with osteoporosis and 30 subjects with normal BMD were selected. Then, informed consent was obtained for participation in the study. During the clinical examinations, tooth loss (TL), plaque index (PI), gingival recession, pocket probing depth (PPD), clinical attachment loss (CAL), and tooth mobility (TM) were measured to evaluate the periodontal status. These clinical examinations were performed to determine the periodontal status by catheter, mirror and probe. Results: During the evaluation, there was no significant difference in PPD, PI, TM, gingival recession, and CAL between case and control groups ( $P\text{-value} > 0.05$ ); that is, osteoporosis has no effect on the above factors. These periodontal factors are almost the same in both healthy and patient groups. In the case of missing teeth, the following results were obtained: the mean of missing teeth was 22.173% of the total teeth in the case group and 18.583% of the total teeth in the control group. In the study of the missing teeth in the case and control groups, there was a significant relationship between case and control groups ( $P\text{-value} = 0.025$ ). Conclusion: In fact, since periodontal disease is multifactorial and microbial plaque is the main cause, osteoporosis is considered a predisposing factor in exacerbation or persistence of periodontal disease. In patients with osteoporosis, usually pathological fractures, hormonal changes, and aging lead to reduced physical activity and affect oral health, which leads to the manifestation of periodontal disease. But this disease increases tooth loss by changing the shape and structure of bone trabeculae and weakening them. Osteoporosis does not seem to be a deterministic factor in the incidence of periodontal disease, since it affects bone quality rather than bone quantity.

**Keywords :** plaque index, Osteoporosis, tooth mobility, periodontal packet

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