

***The Periodontal Health Status of
Postmenopausal Women and its
Relation to Bone Mineral Density***

thesis submitted to the college of dentistry

A

University of Baghdad

In partial fulfillment of the Requirements for

the Degree of Master of Science in

Periodontal Dentistry

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2004

Abstract

The relationship between changes in postmenopausal women and periodontal condition had been studied in many countries.

It has been suggested that estrogen deficiency may play a role in the periodontal disease following menopause.

The purpose of this study is to investigate the influence of postmenopausal alteration on clinical periodontal parameters such as plaque index (PI), gingival index (GI), bleeding on probing (BOP), pocket depth (PD), clinical attachment loss (CAL) and also teeth loss. In addition, this study aims to determine the association of the systemic bone mineral density and any of the clinical periodontal parameters.

Sixty Iraqi women in total were involved in this study, 20 women as a control group of age (35-45) years and forty postmenopausal women divided into two subgroups; group 1 of age (50-60) years and group 2 of age (60-70) years.

All subjects answered a written questionnaire regarding medical and dental history. The above five periodontal parameters were measured and tabulated according to redefined scores, or counts and the data was analyzed statistically.

Fifteen of the forty postmenopausal women, were examined using Dual Energy X-ray Absorptiometry (DEXA) equipment to measure bone mineral density (BMD) in order to determine if there is any relationship between BMD and any of the above periodontal parameters.

In the results, the means, GI, BOP, PD and CAL were found to be significantly higher ($P < 0.001$) in the postmenopausal group (0.96 ± 0.09 ,

0.55±0.04, 1.2±0.11, 1.07±0.12) than the control (0.47±0.05, 0.21±0.03, 0.18±0.04, 0.24±0.05).

In addition, it was found that BMD is negatively associated (negative correlation) with GI, BOP, PD and CAL (-0.35, -0.45, -0.67, -0.7) but the correlation is either of high significant for PD and CAL but not significant for GI and BOP at $P < 0.05$.

It is concluded in this study that clinical parameters may increase depending on the expected negative effects during menopause. Further, it is concluded that BMD of the lumbar spine is related to CAL, PD ($P=0.006$, $P=0.004$), number of teeth loss ($P=0.016$) and to a lesser extent to BOP ($P=0.089$).