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The relationship between body mass index and periodontitis among postmenopausal women

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Abstract: Periodontitis and overweight/obesity prevalence are both increasing worldwide. Overweight/obesity has been suggested as a risk factor for developing periodontitis. The aim of this study was to determine the association between obesity and periodontitis among postmenopausal Jordanian women. Cross-sectional associations between obesity and periodontitis were examined in 400 postmenopausal women aged 50-79 years. All women completed a questionnaire, had a clinical periodontal examination and had their weight and height recorded. Multivariable analysis was carried out using logistic regression with adjustment for possible confounders. Based on body mass index (BMI), 23.5% of the women were considered overweight and 70% were obese. Obese participants with BMI?25 had decreased odds (OR) for having periodontitis compared to participants with normal weight (OR: 0.54; 95% confidence interval [CI]: 0.27-0.87). The obese patients showed significantly higher loss of clinical attachment (CAL), calculus, as well as plaque and gingival index and as compared to normal and overweight ($p<0.01$). The extent of periodontal disease was also significantly higher in obese women as measured by average percent of sites with the deepest CAL?5mm ($p=0.025$). There was no significant difference in mean and percentage of sites with alveolar crestal bone loss (ACH) among different categories of obesity. In conclusion, BMI may be inversely associated with prevalence of periodontitis but positively related to the severity of periodontitis assessed by several periodontal parameters such as CAL, recession, plaque, and calculus. Additional prospective studies to further quantify, or understand the mechanisms, of this association are merited.