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Original Article

Osteoporosis in Postmenopausal Diabetic Women; Prevalence and Related Factors

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Abstract:

Introduction: Diabetes mellitus and osteoporosis are two frequent medical conditions with an increasing prevalence in elderly. This study is conducted to evaluate osteoporosis in postmenopausal females with type 2 diabetes mellitus in Sanandaj, the provincial center of Kurdistan province in the west of Iran.

Methods: From an initial population of 2500 women with type 2 diabetes, 242 postmenopausal women were randomly selected and were compared with 221 non-diabetic postmenopausal women, matched by age and body mass index (BMI). Bone mineral density (BMD) was measured at the L2-L4 vertebrae (anteroposterior projection) and femoral neck with dual energy X-ray absorptiometry (DXA). The statistical significance was set at a P value of .05 or lower.

Results: Prevalence of femoral neck osteoporosis in diabetic women was 30.2 percent (73 cases) and osteopenia was 48.3 percent (117 cases). Osteoporosis prevalence in spine was 7.9 percent (19 cases) and ostropenia was 46.3 percent (112 cases). Osteoporosis in both femoral neck (P=0.001) and spine (P=0.04) were significantly higher in patients than in controls. Correlation between HbA1c and femoral neck (p=0.11, correlation coefficient=0.04) and also spine (p=0.10, correlation coefficient= -0.12) T score was not significant. No significant correlation was found between osteoporosis with presence of microalbuminuria (P=0.91), retinopathy (P=0.33), hypertension (P=0.70), ischemic heart disease (P=0.57) and insulin therapy (P=0.08).

Conclusion: This study shows that type 2 diabetic patients have significantly lower T score values and more frequency of osteoporosis than healthy postmenopausal women.

Keywords:

Osteoporosis ، Type 2 diabetes ، Postmenopausal ، BMD

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