ASSOCIATION BETWEEN CIGARETTE SMOKING AND FRAGILE HIP FRACTURE IN BOSNIAN POSTMENOPAUSAL WOMEN

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Background and Aims

Cigarette smoking is a well-established risk factor for osteoporosis; however, limited evidence exists regarding its association with skeletal fragility in specific population groups. The aim of this study was to examine the association between cigarette smoking and the occurrence of fragile hip fractures among Bosnian postmenopausal women.

Methods

A study was conducted involving 100 Bosnian postmenopausal women, divided into two groups: those with fragile hip fractures (n=50) and those without (n=50). Bone mineral density (BMD) was measured at the lumbar spine and proximal femur using Dual-Energy X-ray Absorptiometry (DXA). Smoking status was self-reported. To compare differences between groups, $\chi 2$ test and Student's t-test were used.

Results

No significant difference in age was observed between groups. A significantly higher proportion of women in the fracture group were smokers (54%; n=27) compared to the control group (16%; n=8) (p=0.0001). Additionally, average femoral neck BMD was significantly lower in women with hip fractures (-2.74 ± 0.73 SD) than in those without fractures (-1.48 ± 0.99 SD) (p=0.0001).

Conclusion

Cigarette smoking is significantly associated with an increased risk of fragile hip fracture in Bosnian postmenopausal women. Lower BMD is also confirmed as a major contributing factor to fracture risk in this population.

Keywords: Bosnian postmenopausal women, fracture, smoking