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Association between abdominal obesity and osteoporotic fractures among elderly Israeli women

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Obesity has been traditionally viewed as a protective factor for fractures. Recent studies have challenged this, particularly regarding abdominal obesity. We studied the associations between abdominal obesity and body mass index (BMI) with osteoporotic fractures prevalent in community dwelling elderly Israeli women. The data in this cross-sectional study was based on *'Mabat Zahav*', with a nationally representative sample of elderly Israelis. The study population included 669 women. Information on osteoporotic fractures site and circumstances was self-reported, and height, weight, waist and calf circumferences were measured. Waist circumference variable was divided into tertiles: <88 cm, 88–99 cm and >99 cm. Sixty five women reported osteoporotic fractures. The fracture group was less educated than the non-fracture group. While BMI was not associated with osteoporotic fractures in any of the models, abdominal obesity (waist circumference >88 cm) was positively associated with the prevalence of osteoporotic fractures, independently of age, smoking, physical activity and BMI (middle and high waist circumference tertiles [3.147 (95% CI, 1.411–7.020), 2.776 (95% CI, 1.054–7.307), respectively]. The middle tertile remained positively associated with osteoporotic fractures in all the models, while in the high tertile, the association was no longer significant after controlling for low calf circumference, functional status, cardiovascular or metabolic disease (presence of hypertension, coronary heart disease, or diabetes), education years and income. BMI was not associated with osteoporotic fractures in sample of elderly women, abdominal obesity was positively associated with osteoporotic fractures are used to elderly women, abdominal obesity was positively associated with osteoporotic fractures in all the models, while in the high tertile, the association was no longer significant after controlling for low calf circumference, functional status, cardiovascular or metabolic disease (presence of hypertension, coronary

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