

OSTEOSCOOP

News on current events in osteoporosis and rheumatology

Cardiovascular diseases and future risk of hip fracture in women

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Some studies have reported associations between cardiovascular diseases (CVD) and bone mineral loss. Osteoclast regulatory factors can affect vascular calcifications, and a high blood pressure can induce abnormalities in calcium metabolism and increase bone mineral loss in women. Low bone mineral density is not only an important predictor of osteoporotic fracture, but is also a risk factor for mortality. It is uncertain, however, whether there is an increased risk of fracture after a cardiovascular disease and whether this risk is present only after specific subtypes of cardiovascular events. The aim of this study [1] was to test the hypothesis that a history of cardiovascular disease leads to an increased risk of hip fracture in women.

This population-based case-control study was conducted on 1327 incident hip fracture cases and 3170 randomly selected population controls among women 50–81 years old in Sweden. Information on cardiovascular and other diseases before the fracture was obtained by linkage to the Swedish National Inpatient Register.

Before study entry, CVDs were diagnosed more than twice as commonly among fracture cases (25%) as among controls (12%). Also, after adjustment for variables including several chronic diseases, the authors found a doubled risk of hip fracture after a CVD event. There was a gradient increase in risk of hip fracture with an increasing number of hospitalizations for CVD, and the highest fracture risk occurred the first year after the CVD event. Hypertension, heart failure, and cerebrovascular lesions remained independent risk factors, with 2- to 3-fold increases in odds ratios, even after mutual adjustments for other CVDs.

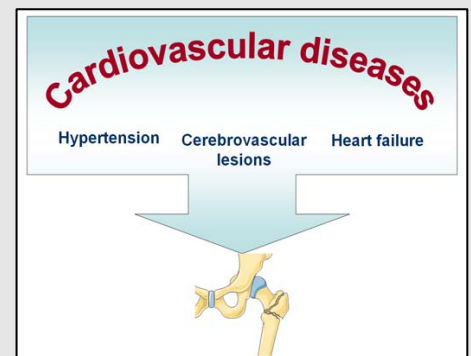
It is concluded that there was a substantially increased risk of hip fracture in women after a diagnosis of a CVD, a finding compatible with the concept of common pathologic pathways for osteoporotic fractures and CVD.

1. Sennerby U et al. *Osteoporosis Int.* 2007;18 :1355-1362.

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This substantially increased risk of hip fracture in women after a diagnosis of a CVD is a finding compatible with the concept of common pathologic pathways for osteoporotic fractures and CVD.



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