UABDIVULGA
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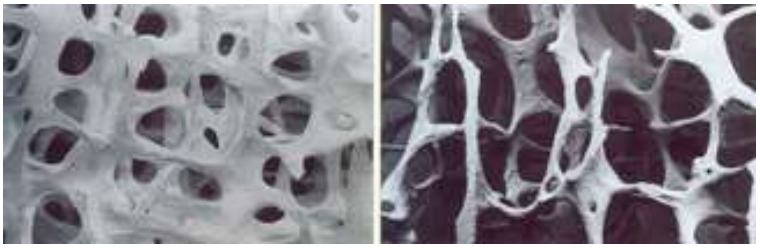
Vitamin D deficit and fracture of hip



Researchers of the Institut Universitari Fundació Parc Taulí have studied in depth the relation between hip fracture and lack of vitamin D in people who suffer osteoporosis. The main conclusion is that the deficit of vitamin D in these patients is high, and especially frequent among individuals with poor exposure to sunlight, a poor nutritional state and poor functional capacity.

Osteoporosis is a disease characterised by low bone mass and by architectural alteration of the skeleton, leading to higher bone fragility and fracture susceptibility (Figure 1). Hip fracture (Figure 2) is the more severe osteoporotic fracture. It is a serious health problem, due to high related mortality, mainly in the first year after the fracture, but also due to the high level of disability that this fracture can produce, since more than one third of patients become dependent on others for their basic daily activities. Osteoporosis in the elderly is produced through different mechanisms, mainly those related to calcium and vitamin D. In the elderly, vitamin D deficiency is especially prevalent among those who are institutionalised, and among those with hip fracture. The association between hip fracture and hypovitaminosis D is well known, but studies in our country are scarce. In addition, the factors associated with vitamin D deficiency are not known.

In this study we included 324 patients over 65 years, with osteoporotic hip fracture admitted to Sabadell Hospital between March 2002 and February 2003. We defined osteoporotic fracture as that produced after a low impact trauma, for example after a fall. Mean age was 83 years, and 80% were women. Blood analyses were performed in all patients to assess vitamin D levels and nutritional state. We used tests to establish functional capacity before the fracture and exposure to sunlight in the previous three months. The functional capacity tests permitted us to know the degree of dependency of the patients in relation to basic functions such as walking, going up stairs, standing up, getting out of bed, feeding or getting dressed. Exposure to sunlight was measured by a questionnaire that defined null sunlight exposure as that of patients confined

at home, poor or medium exposure depending on the number of days they go out, and active sunlight exposure when patients sunbathe.

RESULTS: We observed vitamin D deficiency in 217 patients (67%). Poor nutritional state and low functional capacity are factors independently associated with vitamin D deficiency. Active exposure to sunlight seems, however, to be a protective factor.

CONCLUSIONS: The prevalence of hypovitaminosis D is high in patients with osteoporotic hip fracture. This deficit is especially prevalent among patients with poor exposure to sunlight, poor nutritional state and poor functional capacity.

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References

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