Bone, muscle and rheumatology

ARE FRACTURES AND A DIAGNOSIS OF OSTEOPOROSIS IN THE ELDERLY RELATED TO SOCIAL DEPRIVATION

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Introduction: Elderly patients are more likely to develop fractures and osteoporosis. Social deprivation is linked to certain health conditions and worse health outcomes. However, its relationship with bone health in the elderly is less certain. The aim of this study is to examine the relationship between socioeconomic status (SES) and fractures and osteoporosis.

Methods: The English Indices of Multiple Deprivation (IMD) was used as an index of SES. Postcode residence of patients that presented to the Fracture Clinic, Queen Medical Centre, Nottingham from 1/1/2008–31/12/2011 was used to obtain the IMD. Patients were divided into 5 socioeconomic quintiles from the most deprived to the least deprived. The mechanism of fracture and fracture types were collected from the orthopaedic notes and bone density (BMD) directly from the individuals BMD scans.

Results: 6362 patients (1346 male, 5016 female) with a mean (SD) age of 69(12) years were included in the study. Mean (SD) number in each quintile was 1272(162) patients. SES did not influence the incidence of all fractures and fracture types by site (wrist, foot, upper arm, ankle and elbow). 3064(48.2%) patients had a BMD scan. Using a logistic regression model with socioeconomic quintile as a categorical variable, there was no significant difference between the most deprived and the least deprived people in terms of the risk of having osteoporosis. However, in people younger than 65 years, those in the least deprived were less likely to develop osteoporosis compared to the most deprived (odds ratio 0.66, 95% CI 0.45-0.98, p = 0.04).

Conclusions: Social deprivation appears to be a risk factor for osteoporosis in those under 65 years. It is likely that in the elderly, social deprivation will have a lesser effect compared to other accumulated osteoporotic risk factors. Public health resource should be used to identify osteoporosis in those less than 65 years living in more deprived areas.