Depression, falls, and osteoporotic fractures

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Dear Editor,

We read the article by Afrin et al. with great interest [1]. In their study, the authors found that for postmenopausal women, falls in the previous 12 months were associated with fracture in the following 5 years through logistic regression models. They said the models were adjusted for baseline age, body mass index, dairy calcium intake, number of prescribed medications, number of chronic health disorders, current smoking, alcohol use, leisure physical activity, restricted mobility, and use of estrogen hormone therapy. However, in our opinion, the data of depression should be considered in the study.

Depression is a global public health concern [2]. Multiple studies have proved that depression was a risk factor for osteoporotic fractures [3–5]. In our previous study, we found that for postmenopausal women with osteoporosis, depression was associated with a higher risk of thoracolumbar fracture, with more fracture pain and lower quality of life in the 2 months following fracture [5]. Furthermore, a recent meta-analysis indicated that depression was significantly related to an increased risk of osteoporotic fracture and bone loss [6].

Falls are common in the elderly and a positive correlation between depression and falls was found in a few studies [7, 8]. Hoffman et al. found that among community-dwelling older adults, depression was associated with subsequent falls, but falls were not associated with later depression [7]. In a meta-analysis, the authors demonstrated that depression was a significant predictor of falls (OR = 1.46) [9]. Moreover, the Hendrich II Fall Risk Model is a widely used fall risk assessment tool, which is intended for the nurse at the point of care to predict patients' risk of falls [10]. In this model, depression is one of the eight risk factors.

Hence, given the sophisticated correlation among depression, falls, and osteoporotic fractures, it is necessary to take account of the data of depression in the adjusted models.

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Compliance with ethical standards

Conflict of interest None.

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