Letter to the Editor

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Interpretation of the Association between Beta-Blockers and Hip/Femur Fracture

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Dear Sir,

In a recent publication on the effects of carvedilol and low-turnover bone disease, Dr. Goto and colleagues have cited our work [1, 2]. They wrote that 'we have suggested that use of beta-blockers is associated with a reduced risk of fractures' [1]. We are afraid that this does not reflect the key finding of this study: although we observed a small inverse association between beta-blocker use and risk of hip/femur fracture in Dutch and British patients, it is unlikely that this effect was causal: 'the effect was constant with cumulative dose and the odds ratio [between beta-blocker use and hip/femur fracture risk, FV] was below 1.0, even among patients who had just started treatment with beta-blockers. As the mechanism by which beta-blockers could influence BMD is likely to need some time to exert a clinically relevant effect, this finding suggests that the association between beta-blockers and fracture risk is not causal' [2]. Although our study was conducted 5 years ago, we are not aware of any additional strong evidence which justifies a different interpretation of those findings.

Disclosure Statement

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Reply

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We appreciate the interest of Dr. de Vries and Dr. Souverein in our report. We believe they have concluded that an association between beta-blockers and fracture risk is not causal, although they observed a small inverse association between the use of beta-blockers and the risk of hip/femur fractures. We have cited seven papers [1–7] that suggest that the use of beta-blockers is associated with a reduced risk of fractures. These papers, except for their paper, concluded that treatment with beta-blockers is associated with a reduced risk of fractures. However, as they have mentioned, the evidence is limited because all of these are observational studies. Therefore, to clarify the clinical effect of beta-blockers on fractures in humans, large randomized controlled trials that include fracture as an endpoint should be conducted.

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