Letters to the Editor

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Response to Letter by Tsuda

Response:
With great interest we read the letter from Dr Tsuda regarding our article, in which we showed that the risk of hip fracture is increased 2-fold after having a stroke. The risk of hip fracture was even higher in the 3 months after stroke among females and in patients aged ≤70 years.1

Dr Tsuda argues that patients who have a stroke may have decreased bone mineral density (BMD), which has been associated with hypertension. However, the extent to which this would translate into an increased hip fracture risk is not clear. For instance, proxy indicators of hypertension such as the use of antihypertensive drugs or statins have not been associated with an increased risk of hip fracture.2,3

In our study, we were not able to measure blood pressure or BMD. Therefore, we cannot exclude the possibility that patients with stroke were already at an increased risk of hip fracture caused by hypertension. However, our findings showed a pattern of an increased risk of hip fracture immediately after stroke that rapidly decreased after that. This rapid increased risk of fracture is probably the result of falling due to instability, and not of decreased BMD. Furthermore, rapid loss of BMD was mainly observed at the patient’s paretic side of the body (up to 14%) in the year after stroke.4,5 This observation supports the hypothesis that decreased BMD after stroke is more associated with stroke than with underlying hypertension.

Future studies should distinguish between stroke and hypertension as risk factors for a hip fracture. Still, regardless of the underlying causal mechanism, our clinical message remains the same: it is important to conduct fracture risk assessment immediately after a patient is hospitalized for stroke. Fall prevention programs, BMD measurements, and use of bisphosphonates may be necessary to minimize hip fractures in the elderly during and after stroke rehabilitation.

Disclosures
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Sander Pouwels, PharmD
Arief Lalmohamed, BSc
Hubertus G. Leufkens, PhD
Anthonius de Boer, MD, PhD
Utrecht Institute for Pharmaceutical Sciences
Division of Pharmacoepidemiology and Pharmacotherapy
University of Utrecht
Utrecht, The Netherlands

Cyrus Cooper, MD, FMedSci
MRC Epidemiology Resource Centre
University of Southampton
Southampton General Hospital
Southampton, UK; and
Institute of Musculoskeletal Sciences
University of Oxford
Oxford, UK

Tjeerd van Staa, MD, PhD
Frank de Vries, PhD
Utrecht Institute for Pharmaceutical Sciences
Division of Pharmacoepidemiology and Pharmacotherapy
University of Utrecht
Utrecht, The Netherlands; and
MRC Epidemiology Resource Centre
University of Southampton
Southampton General Hospital
Southampton, UK

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