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CORRESPONDENCE

Correspondence: "Effect of early treatment with zoledronic acid on prevention of bone loss in patients with acute spinal cord injury: a randomized controlled trial"

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It was with great interest that I read the recent article by Goenka et al. [1] on the use of zoledronic acid (ZA) to treat acute bone loss in patients with spinal cord injury (SCI). The authors are to be congratulated for their important contribution to the literature. Their randomized controlled trial (RCT), which included 60 subjects divided into two groups, is three to four times larger than previous studies on the same topic [2–4]. The associated improvement in statistical power with such a large RCT represents a substantial benefit to the research field.

One aspect of the authors' study that deserves comment is their choice of skeletal sites for bone density measurements. In their Introduction, the authors correctly note that fragility fractures post SCI most commonly occur in the distal femur and proximal tibia. Given that recognition, it is unfortunate that the authors chose to limit their bone density measurements to the hip. Bauman et al. [3] and Schnitzer et al. [4] have previously examined bone changes in the distal femur and proximal tibia in studies of ZA treatment in patients with SCI. Those two studies of ZA treatment post SCI are the only ones to date that have reported bone density near the knee. What is perplexing about those two studies is they show contradictory trends. The results of Schnitzer et al. suggest a benefit of ZA treatment in the distal femur, although the effect was not statistically significant. The results of Bauman et al. suggest a negative effect of ZA on knee BMD. If the counterintuitive results of Bauman et al. are replicated, it would raise a serious question about the use of ZA tor treating post-SCI bone loss. It could have been extremely valuable to the field had Goenka et al. measured bone density at the knee in response to ZA treatment in an RCT as large as theirs.

One challenge with bone density scanning at the knee is there is no consensus on the best protocol for dual-energy X-ray absorptiometry (DXA) scanning. In spite of that lack of consensus, there are several knee DXA protocols that have been used multiple times in SCI studies, including the one developed by Shields et al. [5]. The Shields protocol is straightforward to implement. Given the effort and expense of conducting an RCT the size of the authors', it seems like a lost opportunity not to have performed DXA scanning at the knee. In the future, investigators who study bone loss following SCI should be encouraged to perform DXA scans at the knee, since that is arguably the most important clinical site in terms of fracture incidence in patients with SCI.

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