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Letter to the Editor

Letter regarding “the effects of bone-substitute augmentation on treatment of osteoporotic intertrochanteric fractures”

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To the Editor,

We read the article by Chang FC et al. [1] about the effect of bone-substitute augmentation (BSA) in the treatment of osteoporotic intertrochanteric fractures with great interest. We would like to raise some concerns.

1. We are skeptical that BSA can prevent excessive sliding of a lag screw. In fact, BSA may only enhance the anchoring effect between the femoral head and lag screw, with no positive effect on excessive sliding.

Sliding is mainly associated with poor bone contact and alignment. The association between BSA and sliding distance is unknown. We are concerned about the idea leading to misinterpretations.

2. The primary outcome in the study was sliding distance. However, the sliding distance may not be an appropriate clinical outcome from a mechanical point of view because it is not a surrogate marker for mechanical failure. In addition, it is important to rethink the clinical implications of major problems in patients. We recommend that a pain score or a functional hip score that measures over-sliding distance is suitable for secondary outcomes [2].
3. The analysis of mechanical failures did not reflect several confounding factors, including bone quality, fragment geometry, reduction quality, implant selection, and implant placement [3]. A conclusion based solely on univariate analysis may not reflect the true effect of BSA. These known confounding factors could be partly resolved using appropriate statistical methods, such as propensity score matching analysis [4].
4. Similarly, the analysis of functional outcomes did not reflect confounding factors such as pre-injury mobility, dementia, and medical comorbidities such as anemia [5].

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These concerns highlight possible misinterpretation of the findings in the study, and the potential influence of confounders that could be partly addressed by further statistical considerations.

Conflicts of interest

The authors declare no conflicts of interest.

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