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No more 1-year postoperative mortality after acetabular versus proximal femoral fractures in elderly patients

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Dear Editor:

We read with interest the article by Stetzelberger et al. about the postoperative mortality after surgically treated acetabular fracture for the elderly ?60 years old [1]. They concluded that the 1-year mortality rate after surgically treated acetabular fracture is lower than that after operative treatment of proximal femoral fractures, despite a higher perioperative complication rate after acetabular fractures and after adjustment for comorbidities. We have two issues want to discuss with the author.

First, the conclusion was based on an abnormally high mortality rate after proximal femoral fractures (32.6% reported). The reported high mortality of proximal femur fracture might be due to data-collection from a level-I trauma center, where the cases might be heavily injured or have more comorbidities. However, more than 80% of the proximal femur fractures came from ground-level falls without associated injury [1] (supplement data of original article). In addition, according to previous regional report from Switzerland [2] and a systematic review [3] of the literature over the world, the 1-year mortality rate after

elderly hip fractures were 22% and 21.8% respectively which did not differ much from the mortality rate of acetabular fracture they reported (17.6%, before matching). References which indicated high mortality rate of the proximal femoral fractures they quoted in the discussion were either nearly two decades ago [4,5], report of only 30-day mortality rate [6], or from extremely old elderly [7] (mean age of 86 years) and the bias derived from selection of references which might mislead the judgement of the readers.

Second, the authors tried to match some variables to accommodate the influence of different underlying situations between two groups and claimed their success based on the significant difference in the cumulative mortality rate remained. However, the mortality rates of proximal femoral fractures before and after matching were exactly the same (32.6% after rounding). This might indicate that the matching variables were not decisive confounders determining 1-year mortality rate of this population, mis-processing during data management, or by chance. Besides, some factors used to match, such as modified Frailty Index, came from references unrelated to geriatric hip surgery and was only validated from short-term 30-day mortality. Furthermore, maybe other factors such as Activities of Daily Living [8] should be included. There was one hint that those with proximal femur fracture might have some underlying problems which cause their high mortality. Length of hospital stay of those with proximal femur fracture was equal or even longer than that of acetabular fracture under the premise of significantly higher complication rate of acetabular fracture. According to these concerns described above, the generalizability of the conclusion of this article is questionable. We believe it is better to modify the conclusion into “No more 1-year postoperative mortality after acetabular versus proximal femoral fractures in elderly patients.”

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Conflict of Interest: None Declared