

## Correspondence

### Cemented or uncemented hemiarthroplasty for the treatment of femoral neck fractures?

*Sir*—We read with interest the article by Yli-Kynny et al. (2014) on the use of cemented versus cementless hemiarthroplasty in the treatment of femoral neck fractures. However, we would like to know some aspects of the study which would be of help to orthopedic surgeons.

The authors found an increased mortality rate directly related to the use of cemented hemiarthroplasty and fat embolus syndrome in their study. However, the mortality after hip fracture is multifactorial including operative delay (Ratcliff et al. 2008). In the present study the time of the fracture event and start of the surgical intervention were not presented.

The second point is that hip fracture is associated with a substantial increase in mortality with co-existing chronic renal failure (Karaeminogulları et al. 2007). We found no information about the co-existence of renal disease.

be delayed. It also has been found out in another study from the PERFECT database that operative delay itself may not be an independent predictor of postoperative mortality (Sund and Liski 2005).

As we did not report analyses that had been adjusted for the operative delay or chronic renal failure in our article, we will do it here. Prevalence of chronic renal failure was 7.8% among uncemented and 6.3% among cemented patients ( $p < 0.001$ ). We also found out, as expected, that prolonged operative delay was associated with higher mortality. However, it did not affect the mortality difference between cemented and uncemented hemiarthroplasty. Similarly, the inclusion of renal disease as a covariate did not affect the difference in mortality between cemented and uncemented hemiarthroplasty.

In other words, our conclusions remain the same after these additional adjustments.

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*Sir*—We appreciate your interest towards our article about the hip hemiarthroplasty (Yli-Kynny et al. 2014). It is true that mortality during the first 4 days after hip fracture surgery was higher among patients treated with cemented hemiarthroplasty. It is also true that we suggested the cement implantation syndrome as a possible cause for this. However, we would like to stress that we did not suggest it to be the only cause for the difference noted.

The postoperative mortality of hip fracture patients is higher when the delay to operation is longer (Bottle and Aylin 2006). However, it is less clear whether a direct relationship exists after adjustment for patients' comorbidities (Sund 2006). In other words, it is likely that patients with more serious health issues (and at higher risk of death) are more likely to

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Sund R. A rapid response to the article of Bottle A and Aylin P. "Mortality associated with delay in operation after hip fracture: observational study". *BMJ Epub only*, original article published in *BMJ* 2006; 332: 947-51.

Sund R, Liski A. Quality effects of operative delay on mortality in hip fracture treatment. *Qual Saf Health Care* 2005; 14: 371-7.

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