Two queries on M. Noticewala et al.: Has the risk of dislocation after total hip arthroplasty performed for displaced femoral neck fracture improved with modern implants?

Keywords:

Dislocation
Total hip arthroplasty
Acetabular cup

Dear Editor,

We read with interest the above-mentioned article [M. Noticewala et al., Has the risk of dislocation after total hip arthroplasty performed for displaced femoral neck fracture improved with modern implants?, *J Clin Orthop Trauma* (2017)], which implemented a retrospective study to determine the incidence of hip dislocation following THA for displaced femoral neck fractures (DFNF) and to identify risk factors for dislocation.

There are two queries which we would like to communicate with the authors.

1. Four dislocation (4/66, 6%) events occurred after surgery and 47% of the acetabular cups were located outside of the Lewinnek safe zone in 66 patients included in the study on the basis of post-operative anteroposterior (AP) pelvic x-rays. Although the dislocation rate of THAs with acetabular cups outside of the safe zone was higher than the dislocation rate for THAs with cups in the safe zone (12.5% vs 0%), the discrepancy was not statistically significant. (HR 0.014; 95% CI 0–1230.3; $p = 0.462$). Hence it is believed that placement of acetabular cups outside of the safe zone was not a risk factor for dislocation. However, the author concludes ultimately that optimal position of acetabular cup is an effective measure to decrease dislocation rate, which seems to be conflicted with the above result (placement of acetabular cups outside of the safe zone was not a risk factor for dislocation).
2. There are only 34 patients (34/66) having adequate AP pelvic x-rays to determine cup inclination and version angles, among which the acetabular cups of 18 patients (group Ta) were in the

safe zone without dislocation and the remaining 16 patients (group Tb) were outside of the safe zone with two dislocations occurring. We must notice that there are 4 cases of dislocation found during the follow-up of this study and the acetabular cups position of the other 2 patients who did not have adequate AP pelvic x-rays is unknown. The discrepancy in dislocation rate between group Ta and group Tb will be statistically significant when making a hypothesis that the acetabular cups of these two patients are outside of the safe zone. And the analysis results based on the above assumption will be contrary to the author's (placement of acetabular cups outside of the safe zone was not a risk factor for dislocation). Therefore, it seems to be unreliable to analyze the effect of acetabular cups position on dislocation rate when the data concerning radiological information of the other two patients are not obtained.

Conflicts of interest

The authors declare that they have no conflict of interests.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.jcot.2018.11.003>.

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