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LETTER TO THE EDITOR

Comparison between mobile-bearing and fixed-bearing knees in bilateral total knee replacements

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Sir,

We have read with interest the article "Comparison between mobile-bearing and fixed-bearing knees in bilateral total knee replacements" by T. Watanabe et al. which was published in *International Orthopaedics* in June of 2005 (volume 29, pp 179–181).

This is one of the few recently published articles comparing mobile- and fixed-bearing prosthesis in bilateral cases which has reported the comparison data almost completely while conspicuously not reporting the data on the comparison of the functional outcome. However, functional outcome is a very important index of comparison between mobile- and fixed-bearing prostheses and, although it is difficult to assess, it has been reported in a number of bilateral studies [1].

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In the study under discussion, the subjective symptoms complained of by the patients, such as a knocking sound, knee pain, discomfort and clicking, were not given adequate attention. We suggest that these symptoms should have been reported in digital form and compared between the two groups. This would have given more weight to the final outcome of the study, as while the literature abounds with reports of there being no difference between mobile- and fixed-bearing prostheses, there is an actual difference in terms of patient satisfaction and there is a higher risk of complications specific to the mobile-bearing prosthesis, with a polyethylene dislocation rate of up to 9.3% reported for the latter [2]. In a polyethylene retrieval study, dislocation and subluxation were significantly more common ($p<0.01$) for mobile-bearing prosthesis (20%) than for fixed-bearing prosthesis (4%) [3], and of these, meniscal bearing is at the greatest risk.

The authors have reported data as averages (range). It would have been more appropriate for the values to have been presented in terms of mean, standard deviation and range. This would have made the data more legible and useful for any kind of review or between-study comparisons.

Outcome assessment has received a new impetus during the past few decades as emphasis has shifted from the area of expansion and technical development to assessment and accountability. The scoring system with simple and few sub-categories for subjective observation gives a higher inter-observer correlation. Any data reported in digital form has a higher correlation coefficient [4]. Although no one system is better than any of the others for all of the factors to be assessed, Bach et al. [4] found a higher inter-observer coefficient for the HSSS and Bristol scoring system than for the KSSS and Hungerford system. We therefore suggest the

application of more than one scoring system when comparing the outcome between mobile- and fixed-bearing prosthesis, a practice which has been reported in some studies [5].

We also wish to bring to the notice of the editors that a reference has been incorrectly quoted in the article under discussion. The first reference in the article – "Bilateral total knee arthroplasty: one mobile bearing and fixed bearing" by Chiu TP, Tang WM, Lam P – is reported to appear in the *Journal of Orthopaedic Surgery* [9(1):45–50 (2001)]. However, this article does not exist in the form cited. It is to be surmised that the authors are referring to the reference: "Bilateral total knee arthroplasty: One mobile-bearing and one fixed-bearing" by Chiu KY, Ng TP, Tang WM, Lam P, which did appear in the *Journal of Orthopaedic Surgery* (Hong Kong) [9(1):45–50 (2001)].

References

1. Aglietti P, Baldini A, Buzzi R, Lup D, De Luca L (2005) Comparison of mobile-bearing and fixed-bearing total knee arthroplasty: a prospective randomized study. J Arthroplasty 20:145–153
2. Bert JM (1990) Dislocation/subluxation of meniscal bearing elements after New Jersey low-contact stress total knee arthroplasty. Clin Orthop Relat Res 254:211–215
3. Stiehl JB (2006) Mobile bearings total knee arthroplasty. In: Scott WN (ed) Insall & Scot surgery of the Knee, vol. 2, 4th edn. Churchill Livingstone, Philadelphia, pp 1558–1573
4. Bach CM, Nogler M, Steingruber IE, Ogon M, Wimmer C, Gobel G, Krismer M (2002) Scoring systems in total knee arthroplasty. Clin Orthop Relat Res 399:184–196
5. Price AJ, Rees JL, Beard D, Juszczak E, Carter S, White S, de Steiger R, Dodd CA, Gibbons M, McLardy-Smith P, Goodfellow JW, Murray DW (2003) A mobile-bearing total knee prosthesis compared with a fixed-bearing prosthesis. A multicentre single-blind randomised controlled trial. J Bone Joint Surg Br 85:62–67