Reviewer's report

Title: Charnley low-friction arthroplasty of the hip. Five to 25 years survivorship in a general hospital.

Version: 1 Date: 10 January 2008

Reviewer: robert bourne

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Summary

This paper assesses the results of 404 Charnley low friction arthroplasties of the hip implanted between 1976 and 1993 in a general hospital by general orthopaedic surgeons. Survivorship at 25 years for both the stem and the cup was 83%. Survival was higher in those arthroplasties implanted in patients older than 60 years of age. The authors conclude that Charnley low friction arthroplasty undertaken at general hospital by general orthopaedic surgeons featured similar outcomes to those found in centres devoted to hip surgery.

Constructive Suggestions

Pg. 2, par 2, line 1 - please insert percentages after each of the complications.

Pg. 3, par 1 - the Swedish Hip Register has some excellent long term data of Charnley total hip replacements performed in high volume community, low volume community and academic centres. The authors should at least comment on the many publications which have been performed from this source as it directly relates to the subject matter of the paper. It would also provide a background to which the authors can compare their data to other similar general hospitals.

Pg. 4, par 1 - authors claim that the senior surgeon (DHV) learned the Charnley technique at Wrightington, yet I note that a Smith Petersen anterior approach without performing an osteotomy of the greater trochanter was performed. Do the authors feel they truly did the Charnley technique? Also, there should be some description of the bone cement used and whether or not first, second or third generation cementation was utilized.

Pg. 5, par 2, line 2 - this is a difficult line to understand. What do the authors mean by, â##â#?, 23.8 were revised regularlyâ#??

Pg. 5, Discussion, line 4 - it might be helpful for the authors to include a Table outlining the reported clinical results of the Charnley low-friction arthroplasty, dividing these into high volume community, low volume community and academic centres. This would give the readership an opportunity to compare the results of this paper with those published in the literature.
Pg. 6, line 1 - did the authors deep infection rate decrease with time? When did the authors start to use antibiotic prophylaxis? Did the authors use laminar airflow or body exhaust suits? Did the authors use antibiotic bone cement?

Pg. 6, par 3, line 1 - the authors have not included any health-related quality of life outcomes one would expect in a paper such as this. Similarly, one might expect a radiographic analysis of surviving patients as to whether there was definite, probable or possible loosening. I would recommend that the authors include this information.

Overall Assessment

This is an interesting manuscript which is well-written. I believe that it should be considered for publication with major revision. Specifically, the study would benefit from the inclusion of health-related quality of life outcomes (i.e. Harris Hip Rating, WOMAC, Oxford-12, ETC). The paper would also be strengthened by inclusion of radiographic follow-up. Once this is done, the authors might want to combine both the clinical failure and radiographic failure data such that the readership will have a better handle as to the true success of the Charnley low-friction arthroplasties.

Finally, it would be helpful to have a few clinical examples of radiographs of patients who are both successful and failures included in the manuscript.

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Not suitable for publication unless extensively edited

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

Consultant for Smith & Nephew, Inc.