Reviewer's report

Title: Mid-term Results of Stryker Scorpio Plus Mobile Bearing Total Knee Arthroplasty

Version: 1 Date: 6 November 2011

Reviewer number: 3

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General comments:
The authors reported the mid-term results of Scorpio Plus Mobile Bearing TKA. The number of cases (66 patients) and a mean follow-up periods (5.8 years) are adequate.
However, the reviewer has some comments and concerns.

- Major Compulsory Revisions
  #Introduction#
  I feel that the purpose of this study is not clearly described. What is the difference between Scorpio Plus and other mobile bearing total knee systems? Please elaborate the characteristics of this model using some figures, and then describe what the authors would like to know in this study.

  #Methods#
  #Patients
  Follow-up rate (65.3%) is not adequate for the mid-term results. What is the cause of loss of 32 patients?

  #Surgical technique
  Why did the authors cut the distal end of the femur uniformly at 7°?
  How did the authors determine the posterior slope of the tibia during the tibial cut?
  Did all the patients begin full weight-bearing from postoperative day 1?

  #Clinical and radiographic evaluation
  Please clarify the methods for the radiographic evaluation in the Methods section.

  #Statistical analysis
  T-test can be applied for metric variables. Because the JOA score use discrete variables, the authors should use nonparametric statistics.
#Discussion#
Although the Scorpio Plus SuperFlex PS mobile bearing system has been designed to provide deep knee flexion, the average flexion angles of 116.8° in OA and 113.7° in RA are equivalent to those of other types of mobile bearing TKA. Please add discussion concerning to a discrepancy between the design concept and clinical results.

Why did failure of the locking system occur? Are there any structural defects in the tibial component? How can the authors prevent this problem?

- Minor Essential Revisions

#Results#
Please specify clearly table 2 and figure 1 in the manuscript.

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

**Quality of written English:** Needs some language corrections before being published

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