Reviewer's report

Title: Dynamic in vitro measurement of patellar movement after TKA: an in vitro study

Version: 1 Date: 5 April 2005

Reviewer: Shuichi Matsuda

Reviewer's report:

General
The current study evaluated patellar movement before and after TKA with and without patellar resurfacing using cadaver specimens. They found that resurfacing patella resulted in similar motions to the physiologic patella. It could be an informative paper, but as presented, I have some questions about this paper, especially in discussion.

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

Discussion
Page 8, line 22
The authors found that the resurfaced patella tilted two more times more than the physiologic patella. They should discuss the reason of the tilting. Is it possible that the lateral facet of the patellar component is too thick in comparison of the physiologic patella?

Page 9, line 3
I do not agree with that the conclusion "This study demonstrated the ability of a patella resurfacing to restore the physiological kinematics of the patella after TKA." because the resurfaced patella tilted more internally.

Conclusion
The resurfaced patella shifts as the preoperative patella, but tilted two times more than the physiologic patella. It seems that the tilted component would reduce contact area to cause patellofemoral complications. In addition, it is difficult to discuss the patellar kinematics of the Interax in comparison to that of other TKA systems because only the Interax was evaluated in the experiments of the current study.

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: Needs some language corrections before being published

Statistical review: No

Declaration of competing interests:
I declare that I have no competing interests.