Reviewer's report

Title: The effect of high tibial osteotomy on the results of total knee arthroplasty. A matched case-control study.

Version: Date: 23 May 2007

Reviewer: René Verdonk

Reviewer's report:

General

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)
The authors have addressed a difficult subject investigating differences in results of total knee arthroplasty between postosteoetty cases and primary total knee arthroplasty.
The orthopaedic world tends to believe that postosteoetty cases have worse clinical results than primary cases.
Apparently the authors suggest that, but for relatively minor radiological discrepancies, no major differences are to be expected between these two types of patients.
They come to this remarkable conclusion based on their correct follow-up with an outcome at a median of 3.7 years. It could be of major interest to the specialist reader to enlarge on the postoperative time required to obtain similar median clinical results.
Indeed, extended investigations in the literature suggest that the improvement in mobility stops at 1 to 2 years postoperatively. One could wonder whether the index group would have required more time to reach the maximum range of motion.

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)
Page 5
... after lateral closing wedge tibial osteotomy ... : which type of fixation was used ? Was a plaster cast immobilization at the index surgery required ? Was the hardware removed at the total knee implant surgery ?
In the discussion, the authors could enlarge on their potential expertise whether or not an opening wedge osteotomy would interfere more or less with total knee arthroplasty after a closing wedge osteotomy.
Page 10
... have been reported. : do you have a reference ?
... replacement after previous CLOSING WEDGE osteotomy ...
... Patellar eversion difficulties resulted in three lateral releases ... : one can understand that eversion difficulties induce the need for tuberosity osteotomy. It is unclear how eversion difficulties of the patella may require lateral release.
Page 11
... We did not encounter any infections in our series NOR DID component loosening occur in the index group IN THE COURSE OF THIS FOLLOW-UP.
... young patients with osteoarthritis of THE MEDIAL compartment has good results. Indeed, one needs to be very precise in this respect bearing in mind the worse results after varus osteotomy.
... The cumulative revision rate for ... : it is not fair to state only one Swedish registry in that respect. It clearly appears from your text that you prefer valgus osteotomy for the treatment of medial compartmental arthrosis. However, extensive literature supports better long-term results after unicompartmental prosthesis compared to closing wedge valgus osteotomy !
... the significance of age in knee replacement SURVIVORSHIP : it may be even worse when considering
In our opinion, young patients... please do not enlarge on this particular subject. It is not correct to blindly state your preferences in this particular paper with a very different subject. As with every surgery, correct indications will lead to good results both in uni replacement and in alignment correction.

... Over the past decade 443,008 total knee arthroplasties... this is a very cheap conclusion.

... of patients receiving TKA after prior HTO IN THE COURSE OF OUR EVALUATION.

... Especially no deep infection or... most infections are of late hematogenous origin. A median follow-up of 3.7 years is very short in respect to component loosening.

Discretionary Revisions (which the author can choose to ignore)

What next?: Accept after minor essential revisions

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

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.