Reviewer's report

Title: Patients with Osteoarthritis Have Better Functional Outcomes compared to Rheumatoid arthritis after primary hip arthroplasty: A cohort study

Version: 1 Date: 24 July 2013

Reviewer: Hassan Ghomrawi

Reviewer's report:

Title:
The title mentions RA and OA patients but not AVN patients.

Abstract:
In the results section, the authors should be consistent about their language by using higher/lower odds to convey the association rather than significantly associated.

Manuscript:
Introduction:
No comments.

Methods:
The authors compare RA to OA and AVN. These are different populations. For example RA is prevalent in younger patients and in females whereas OA is much more prevalent in older patients. The authors do not mention anything about any age restrictions when defining their patient population. Both RA and AVN could occur in children. Were they included?
The primary diagnoses appear to have been well thought however the authors should be more explicit about how diagnoses were confirmed.
The reviewer does not understand using the distance from the medical center as a predictor.
The authors recognize the bias inherent in a cohort study and try to account for the bias by doing regression analyses to adjust for covariates. The reviewer believes that this is not the optimal design to address the question the authors are trying to address. The authors have thousands of OA patients and few hundred RA and AVN patients in their database. A more suitable design would be case-control study whereby the authors would match RA and AVN patients to similar OA patients and them compare their outcomes would have been more convincing to the reviewer. Propensity score matching could also be used. As mentioned above, the RA and AVN populations are very different from the OA population and unless there is some similarly on some key baseline characteristics, the findings may be simply the result of different in baseline characteristics.

Results:
It is unclear how the response rates were calculated. At the end of the first paragraph, the authors indicate that the survey response rates were 62% (5707/9154) at 2-years and 53% (3289/6243) at 5-year followup. Why are the denominators for the 2-year and 5-year response rates different? Why are these denominators also different from the pre-operative n=6168 that is presented in table 1?

While making sure that the 2-year and 5-year cohorts are similar to the pre-operative, they should not become a core focus of the study and could be moved to the appendix. The reviewer believes that there should be a table that compares demographic and clinical characteristics by primary diagnosis.

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests