Reviewer's report

Title: Predictors of Pain and Use of Pain medications following Primary Total Hip Arthroplasty (THA): 5,707 THAs at 2-years and 3,289 THAs at 5-years

Version: 1 Date: 16 April 2010

Reviewer: Alison Rosemary Harmer

Reviewer's report:

Is the question posed by the authors well defined?
Yes, authors propose to examine pain and predictors of use of pain medications after THA; and this is what is reported in Methods and Results.

Are the methods appropriate and well described?
1. Methods are appropriate; however, a minor point is that method of calculation of odds ratio needs to be explicit; or an appropriate reference quoted.

Are the data sound?
2. Yes. Although a retrospective analysis (and hence detailed analysis of depression/anxiety not available – as the authors acknowledge), the existing data were collected prospectively. Survey response rate is somewhat poor (but typical) at 5 years, especially considering that participants were telephoned if they did not respond to mailed surveys or did not attend follow-up clinics. Reasons for non-response are not detailed. However, given the size of the cohort and the fact that non-responders possessed characteristics that were typically associated with worse pain (and hence data represent conservative estimates), I do not believe that response rate is a major issue of concern in this study.

Does the manuscript adhere to the relevant standards for reporting and data deposition?
3. Minor essential revisions: The authors do not report the cut-off date for their cohort ‘recruitment’, i.e.. all patients undergoing THA since 1993 appear to be included; however, no end date is specified. Exclusion criteria are not specified. One of the reference papers (Rand et al, 2003; Ref 18), which reports upon total knee replacement, specifies exclusion of patients with malignancy, partial or revision replacements; however, these criteria can only be partially applicable to the THA cohort presented here. Although the authors state the response rate in the present analysis, and hence it is possible to calculate the total number of patients who underwent THA, there is no statement regarding actual numbers of patients who were eligible to be included in this retrospective study. Eligibility is discussed in other recent publications by the authors (Refs 22-25); however, these are all in relation to patients who have had TKA, not THA. Albeit a retrospective analysis, a flowchart or at least a statement regarding patient numbers, exclusion criteria, number excluded (and reasons), etc would assist with clarity for the reader in the present paper.
Are the discussion and conclusions well balanced and adequately supported by the data? Yes.

Are limitations of the work clearly stated? Yes.

Do the authors clearly acknowledge any work upon which they are building, both published and unpublished? Yes, quoted.

Do the title and abstract accurately convey what has been found? Yes: title; Yes: abstract.

Is the writing acceptable?

Needs minor essential revisions for typos and expression as detailed here:

Abstract
4. Conclusion, first line: Insert a semi-colon after “pain”, i.e. “moderate-severe pain;...”

Introduction
5. Paragraph 2, line 1: Insert “pain” before “outcomes after THA?”

6. Paragraph 3, line 1: Change “in” to “of”, i.e. “Non-modifiable factors of interest...”

7. Paragraph 3, line 2: Remove the word “pain” occurring between “outcomes pain post-primary...”

8. Paragraph 3, line 3: References (7, 12) (9) should all be included within one bracket, i.e. (7, 9, 12).

9. Page 4, first 2 lines: missing words. “...female gender associated with less post-operative pain...”

10. Page 4, paragraph 2, line 3: missing word. “...associated with worse pain outcomes...”

Methods
11. Page 4, para 3, last sentence: The authors refer to their previous publications, stating that the questionnaires were administered to patients with both knee and hip replacement, however, all these references (Refs 22-25) report on data for patients after total knee replacement. Please revise this sentence.

12. Page 4, last paragraph, line 6: insert a semi-colon after “...is moderate-severe hip pain; ...”

13. Page 5, line 2: uncapitalise the ‘e’ of “and (3) Even...”

14. Page 5, para 2, line 1: Change the ampersand to “and”
15. Page 5, para 2, line 3: missing words. “…operated hip? Responses could include…”

16. Page 5, para 2, line 4: Why was oral steroid use considered as a reference response? Oral steroids are sometimes used for pain (albeit not for hip pain); perhaps a brief sentence could clarify this for the reader.

17. Page 6, para 2, 4th last sentence: Remove “is” from “…Mayo Clinic is provides…”

18. Page 6, para 2, 4th last sentence: Insert italicized words/letter and change comma to semi-colon between “…expectation, both…”, “…since the Mayo Clinic provides THA as a primary medical center for the local residents, but is also a referral center for patients traveling from afar, who may have different severity of disease and different level of expectation; both can impact pain outcomes.”

19. Page 6, para 2, 2nd last line: please confirm how odds ratios were calculated.

20. Page 6, para 2, last line: Should it be “excluding one”? (However, a few of the results presented in the Tables do have a lower bound that equals one…so perhaps should remove “excluding” and instead write #1.)

Results

21. Table 1. Legend. “Legg Parthe’s” should be corrected to “Legg-Calvé-Perthe’s”

22. Table 2. Anxiety and Depression in left-hand column both have a surplus comma after Ref; and it would be clearer to the reader to title the reference category as “none”, rather than “no”. (The latter comment also applies to Table 3.)

23. Table 3. BMI >40. Data need to be bold for both 2- and 5-year results. Ditto for Depression at 5 years.

24. Table 4. Legend under Table 4 differs in configuration from other tables.

Discussion

25. Page 9, para 2, 2nd last sentence: Remove “and” from “…WHO classification (27), and since…”

26. Page 10, para 3, line 5: Insert “i.e., the” between “…center, same…”

27. Page 10, 2nd last line: Insert semi-colon after “…questionnaires”

28. Page 11, para 2, line 1: Insert “after” following “…2- and 5-years…”; and remove the hyphenation from 2- and 5-years.

29. Page 11, para 2, line 3: Insert “are” between “factors amenable”.

Level of interest: An article of importance in its field
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.