Reviewer’s report

Title: Host-specific Factors Affect the Pathogenesis of Adverse Reaction to Metal Debris

Version: 0 Date: 06 Mar 2019

Reviewer: Reviewer 2

Reviewer’s report:

PEER REVIEWER ASSESSMENTS:

OBJECTIVE - Full research articles: is there a clear objective that addresses a testable research question(s) (brief or other article types: is there a clear objective)?

No - there are minor issues

DESIGN - Is the current approach (including controls and analysis protocols) appropriate for the objective?

Yes - the approach is appropriate

EXECUTION - Are the experiments and analyses performed with technical rigor to allow confidence in the results?

Yes - experiments and analyses were performed appropriately

Statistics - Is the use of statistics in the manuscript appropriate?

Yes - appropriate statistical analyses have been used in the study

INTERPRETATION - Is the current interpretation/discussion of the results reasonable and not overstated?

Yes - the author's interpretation is reasonable

OVERALL MANUSCRIPT POTENTIAL - Is the current version of this work technically sound? If not, can revisions be made to make the work technically sound?

Probably - with minor revisions
PEER REVIEWER COMMENTS:

GENERAL COMMENTS: The subject of the study is interesting, although outdated as wear and aseptic loosening is becoming less of a problem with cross-linked poly and ceramics. The hypothesis of the study is speculative as conclusions are made on the basis of qualitative reactions and measurements prone to big variations.

Study hypothesis is not clear, somewhat contradictory and needs revision.

Study design allows verification of the hypotheses, however, number of patients is small (29).

Study wear measurement method is pertinent and controlled. Histology evaluation is performed according to Natu et al.

Considering results and conclusions - not actual "intrinsic factors of variability" were measured but surrogates such as cell counts etc. Measuring signalling pathways is more convincing evidence of variability of response.

Overall impression is positive, orthopedic communities needs more high quality studies considering issues of implant complications. Authors laborous efforts are punctual and meticulous, study design is difficult to perform. Best practices are met.

REQUESTED REVISIONS:

To include limitations and clear objective. One hypothesis is much better for understanding of the objective.

ADDITIONAL REQUESTS/SUGGESTIONS:

no

Note: This reviewer report can be downloaded - see attached pdf file.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review? If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

Quality of written English
Please indicate the quality of language in the manuscript:

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Please complete a declaration of competing interests, considering the following questions:

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