Reviewer’s report

Title: Serum and Synovial Fluid Cytokine Profiling in Hip Osteoarthritis: Distinct from Knee Osteoarthritis and Correlated with Pain

Version: 0 Date: 18 Nov 2017

Reviewer: FR Nelson

Reviewer’s report:

Introduction first page line 46: I was not sure if COMP stood for cartilage oligomeric protein or some other entity. From reference 23 later quoted, it is. Clarify for the reader.

Introduction second page line 30: You might want to add something to the effect that some that some are part of a family small cytokines that act as chemokines to attract nearby cells such as macrophages and granulocytes and that cells may play a role in inflammation.

Strongly suggest that when you mention for the first time each cytokine that you spell out the comparative nomenclature. Example: GRO (C-X-C1 motif ligand = CXCL1), etc. On that topic, in the introduction include the relevance of each cytokine to the inflammatory process. Also, are any of the cytokines you studied involved in neural transmission for pain?

Multiplex assays: list the cytokines here. Was it 7 or 8? In other words, what is measured in that kit? Table 3, which I can't see alludes to others.

In the abbreviation section add COMP, IP10, MCD, and other cytokines.

Did the normal synovial fluid samples from normals come from 5 attempts with five successes or were there some you could not get.

Strongly suggest the use of a simple table that would list the number of patient in each group, the number from whom serum samples were obtained (I guess all), the number that had synovial tissue samples (adding column for cadaver), and number for immunohistochemistry. I kept getting lost.

Results: I read the results relative to figure 1 and suspect that part b of that figure is the only one to allude to the synovial fluid and the rest (a., c., and d.) are relative to serum. If so, create a separate figure for the synovial fluid. It took me 15 minutes just to get to this point and I am still unsure.

Second page of results Line 7: you introduce some other cytokine that were tested. Is this a part of the same kit?

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

Yes

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

Yes

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

Yes

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.

I am able to assess the statistics

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

Acceptable

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