Reviewer's report

Title: Gray-scale ultrasound volar and dorsal additive scores follow the trend of disease activity in rheumatoid arthritis

Version: 4 Date: 21 January 2011

Reviewer: David E Feinstein

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Minor Essential Revisions

1) There are grammatical errors as early as the first sentence of the background paragraph. I would word differently.

Ex/ Change to, "Assessment of synovitis in Rheumatoid arthritis (RA) is a major issue for administration of proper treatments; it has been proven that ultrasound (US) examination could be of valuable help and is currently being investigated as a possible outcome measure for the disease."

2) Grammatical error in last sentence of Objectives.

3) Change examiner to examiner

4) Instead of whilst (an English term); change to while.

5) Echografic change to Echographic.

6) Grammatical error in Results: Starting with "correlations..."

7) Grammatical errors in Introduction - first sentence: Might change it to something like, "The role of US in evaluating the small joints of RA patients is still debatable in Rheumatology".

8) Question use of word "incidence" in third paragraph of Introduction.

9) "In a previous pilot study, we proved that volar synovitis is better correlated to clinical findings than dorsal one" -- this sentence in Introduction, 3rd paragraph doesn't read well; grammar needs correction.

10) Under Patients and Methods (and this applies throughout paper): "Mean (SD) age in our group was 55.7(12.2) years -- would change commas to periods; i.e. 55.7(12.2)

11) Table 1 reference; Again, commas should be changed to periods. I don't think it is necessary to have a column listing N of 42 all the way down the Table - N=42 could be listed at top of table as a given. Clarify VASP, VAS global, VAS MD in methods.

12) under Clinical examination, grammatical errors in last sentence ending with "...were drawn the same day".

13) Under Ultrasonography section, would probably change sonographist to sonographer.
14) Under Ultrasonography section, grammatical errors describing which joints were scanned and explanation of carpal bones scanned. Doesn't read properly.
15) Is there reference regarding rarity of synovitis in MCP1 and PIP1?
16) Under Ultrasonography section, 2nd paragraph, 1st sentence: move comma closer to word bone
17 Under Ultrasonography section, change spelling to differentiating, differentiation, and change commas to periods with grading scale; i.e. 0.5-2 should read 0.5-2.

18) Results section Table 2; change commas to periods; eliminate column of 42 - it's distracting. Not easily defined anywhere what SCORECO (ES) means.
19) I had a hard time following how calculation was made for EPJ vs. ES. Could be a little clearer.
20) Results section: 2nd paragraph referring to Graph 1; Mention of MCP 2, 3, 4, and 5 to 50% prevalence doesn't seem to match the graph. Unclear.
21) Label x and y axis of graphs.
22) Results section: 3rd paragraph reference to table 3 and graph 3 is hard to follow with percentages that they list in sentence.
23) Graph 4; label x and y axis; difficulty lining up MCP/PIP with bar graph associated with it. Didn't understand values listed in 5th paragraph of Results section.
24) Not being a statistician, I would have one examine Tables 4 & 5 for accuracy in conjunction with the link to the last two paragraphs of Results section.
25) Discussion section. The conclusion of this study and the first sentence of the discussion point out the value of the volar scan. To me, this seems to be the authors' main contention and second would be that both volar and dorsal scans follow disease activity. By the title of the paper, it is hard to gather that the volar scan superiority is a main conclusion and main point to get across to the readers.
26) Discussion section; first paragraph: spelling error 7 lines down; word "controle"
27) Discussion section; 9th line down; may not use "his" as females may be offended.
28) Grammatical errors in Discussion section; starting line of "...It is obviously an important issue both in ...
29) Grammatical error Discussion section; last sentence "mostly"
30) Grammatical awkward sentence starting with "..In 2004, Hoving et al..."
31) Grammatical error sentence, "Our differences were not as high, but..."
32) Again, change commas to periods for reference to number data.
33) Discussion, 5th paragraph, after Hoving [24] move comma next to ].
34) Grammatical error with 5th paragraph.
35) Figures 1 & 2 should be labeled with orientation of proximal to distal as this reference standard is different across the globe.

36) Discussion, 6th paragraph; 1st sentence is awkward to read.

37) Discussion, "in conclusion" sentence is grammatically awkward to read. Whole paragraph is grammatically difficult to read.

Major Compulsory Revisions - for my own benefit, the paragraphs in reference to Pearson's coefficient should be reviewed by someone of a more statistician background for authenticity and accuracy.

1) I think the question posed is well-defined.
2) methods appear appropriate and well-described.
3) Data is at times difficult to interpret.
4) adherence standards are ok
5) see comment on conclusion section
6) Lacks limitations of work in discussion.
7) good acknowledgement of work
8) title and abstract convey what has been found
9) This writing is not acceptable in current format. Would not accept until after minor essential revisions are made. Also, after review of statistics for accuracy.

DF

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

**Quality of written English:** Not suitable for publication unless extensively edited

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I declare that I have no competing interests