Author’s response to reviews

Title: Rheumatoid Arthritis patients with fibromyalgic clinical features have significantly less synovitis as defined by power Doppler ultrasound

Authors:
Aneela Mian (aneela.mian@nhs.net)
Khaldoun Chaabo (chaabokhaldoun@yahoo.co.uk)
Julekha Wajed (julekha_w@hotmail.com)
Sujith Subesinghe (sujith.subesinghe@gstt.nhs.uk)
Nicola Gullick (ngullick@nhs.net)
Bruce Kirkham (bruce.kirkham@gstt.nhs.uk)
Toby Garrood (toby.garrood@gstt.nhs.uk)

Version: 1 Date: 24 Jul 2016

Author’s response to reviews:

Response to reviewers

We thank BMC Musculoskeletal disorders for taking the time to review the manuscript of our pilot study. The reviewers have raised some important points. We have tried to address these below.

Reviewer #1:

This is an interesting pilot study with a small number of RA patients including about half of the group satisfying the FM criteria, with the aim to explore the inflammatory activity in the RA with FM patients compared with RA without FM patients. As hypothesized, the RA and FM/joint score patients had lower inflammation assessed by US.
Comments

1. Reference 5 in the introduction should be ref. 3

Thank you for identifying this error. We have amended the reference numbering.

2. The present aim was: "The aim of this pilot study was therefore to determine whether RA patients also meeting clinical criteria for fibromyalgia have lower levels of joint inflammation as determined by ultrasound." I think this is a somewhat unspecific aim, since patients with RA may have high or low levels of inflammation evaluated by US, irrespective of having additional FM or not. Thus, with the inclusion criteria, you may have chosen patients with quite homogenous inflammation. Was the aim more like this: In RA patients with similar clinical disease activity assessed by DAS28 to explore whether RA patients with FM had lower levels of joint inflammation than RA patients without FM as determined by US.

We have changed the aim as suggested. The change has been highlighted in the text.

3. In the method; The PRF and frequency should be included for PD.

These have now been added.

4. Results: "DAS28 scores were significantly higher for patients meeting FM classification, diagnostic and joint count criteria. Tender joint counts were also significantly higher in patients meeting any FM criteria. Median patient global scores were numerically higher but this did not reach significance." Scores and -values should be included.

We have included the scores and values as suggested. To make things clearer, we have removed reference made here to the diagnostic criteria.

5. Conclusion: "This preliminary study has shown for the first time that composite clinical criteria may help to differentiate patients with RA and concomitant fibromyalgia with
DAS28>2.6 who have lower ultrasonographic disease activity." This is not clear, and I do not understand that the study is made to answers this issue.

This preliminary study has shown that the use of composite clinical criteria, i.e. classification criteria for FM indicating widespread musculoskeletal pain in combination with the tender joint criteria indicating limited active inflammatory disease,

We have shown that patients with active disease activity as defined by DAS28 scores but with limited ultrasonographic activity may be differentiated by combining FM classification and tender joint count criteria.

6. Generally, the inclusion criterion was to include a balanced group with patients satisfying or not the joint criteria with TJC no 7 > SJC. In the results, the differences between these two groups should have more focus.

We have expanded the results to make the difference between these two groups the focus.

7. Table 1; Significance between the groups should be included.

Significance values have now been added to table 1.

Reviewer #2

The authors attempt to address a common practical problem that rheumatologists treating RA patients encounter on regular basis: treatment of RA patients with FMS and differentiating whether the pain is caused by the RA or FMS. The authors provide a clear rationale for the study, enroll an appropriate group of patients, document ethical approval, summarize the results and discuss them. Few issues, however are unclear:

1. Patients classification into the different groups is hard to follow in the text. Perhaps a flow chart would help clarify how the patients enrolled were classified into 1) patients with RA
meeting criteria for FMS and 2) control group: patients with RA who did not meet the criteria for FMS

Many thanks for your suggestion. We have amended the methods and we hope the two groups are now clearer.

2. It would be helpful to add how many of the enrolled patients were on treatment, how many are CCP positive and if a CRP is available. Describe the statistical methods for all of the intended outcomes. The authors state using the Mann-Whitney for the PD and GS comparisons but not the rest of the outcomes.

Unfortunately CCP status was not available for all the patients and a CRP at the time of assessment was not available for all patients. Mann-Whitney was also used for the other outcomes. This has now been added to the manuscript.

3. The results section refer to a figure 1, line 42, which is not included in the manuscript

This figure was removed for the final manuscript. We apologies for having overlooked reference to it. This has now been removed.

4. Table 1 does not show the p value in comparing the intended groups. It only shows descriptive statistics.

We thank you for these comments. P values have now been added.

5. Table 2 is also descriptive but does not show the sample size for each of the groups

The sample sizes are as those stated in table 1. These have now also been added to table 2.
6. Ensure that all abbreviations are included underneath the tables. It makes it easier to read.

We have now added the abbreviations underneath the tables to make it easier to read.

7. What is PG in Table-1. It is not in the abbreviation list.

PG is an abbreviation for patient global. This has now been added to the abbreviation list.

8. No sure why 95% CI is reported for age. Is this the age range?

This has now been changed to show mean and standard deviation.

9. The abbreviations in the table are inconsistent which makes it confusing. TJC in table 1, TJ in table 2. Please address.

Thank you for out this discrepancy. These have now been changed so the same abbreviations are used in both tables.

10. In the discussion, the authors need to address the reasons for the negative findings but fail to mention what are the lessons learned from this pilot study that will be applied to the larger study.

Many thanks for your input on this. We have expanded the discussion to address this point.