Reviewer’s report

Title: Mediterranean diet and extended fasting's influence on changing the intestinal microflora, immunoglobulin A secretion and clinical outcome in patients with rheumatoid arthritis and fibromyalgia. An observational study

Version: 1 Date: 5 September 2005

Reviewer: Dorothy Pattison

Reviewer's report:

General
This is a study of 1) the effect of dietary change (semi-fasting or Mediterranean-type diet) on faecal flora and 2) the consequent association between change in faecal flora with clinical outcome in two distinct rheumatic conditions - rheumatoid arthritis (RA) and fibromyalgia (FM). Some evidence exists for an effect of changing faecal flora on symptoms of RA, but less so for FM, thus there is a novel aspect to this study.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

1. There is no information provided on dietary intakes of participants prior to the study intervention. Patients with rhematic diseases frequently alter their dietary patterns to help with symptom relief, usually according to healthy eating guidelines. Therefore, diets may already be close to the accepted mediterranean-type diet, which might limit any response/change in faecal flora for participants directed to take the Mediterranea diet. Given that data was collected on dietary intake of participants prior to the study using a food frequency questionnaire it would be possible and is essential to present this information in the paper.

2. As well as describing drug exclusions, information is also required regarding medications that patients were on e.g. non-steroidal antiinflammatory drugs and other complemente therapies.

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

1. Protocol/Discussion - the authors should discuss the implications of such a short intervention time for the mediterranean diet - is 2 weeks long enough to have an effect on faecal flora? Particularly as the authors have highlighted the lack of sensitivity of the molecular anlaysis equipment used.

2. please could the authors clarify if a standardised protocol was followed when collecting anthropometrical measurements and who took these measurements.

3. Within group weight loss (i.e. weight loss of fasting RA patients and fasting FM patients separately)

4. The differences between the fasting RA and mediterranean RA patients should be acknowledged and discussed (fasting RA patients were older, fatter and had more active disease - would influence outcome of interventnion)

5. Table 1 - data for RA (DAS28) and FM (VAS) are in the wrong columns!

6. Figures 1 and 2 - the legends are confusing. Presumably 'Advice only' = fasting and 'Lifestyle therapy' = Mediterranean Diet?

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7. p8 Clinical data: 1st sentence - need references for diagnostic criteria for both RA and FM

8. p13 2nd para: sample size 'small' rather than 'moderate'
Discretionary Revisions (which the author can choose to ignore)
1. Title - suggest ‘Mediterranean diet OR extended ......) use of AND implicates two interventions not one or other
2. Authors/Institutions - Rainer Ludtke ‘3’? should be ‘2’
Abstract
3. p.2 - Background: 1st para, line 3 suggest 'little is known' instead of ‘few’
4. p.2 - Results: p=0.09 is NOT statistically significant, particularly in such a small sample.
Main Text
5. p.4 - Background, 2nd para: grammar and tense need attention
6. p.5, line 2: reference (13) in text is same as reference 10 in bibliography - amend reference numbering or insert alternative citation.
7. p.5 this is not a 'vegetarian' Mediterranean diet - it includes fish
8. p.5, 2nd papra: give actual length of hospital stay
9. Methods p.5: suggest 'specialised' rather than 'specialising'
10. p.8,para 1: last sentence - explain
11. p9 statistics - need reference for STAT (?STATA) software
12. p14 1st para: suggest 'negligible' instead of 'neglectable'
13. throughout the text the use of abbreviations for rheumatoid arthritis (RA) and fibromyalgia (FM) are inconsistent.
14. Overall punctuation needs attention
15. In the conclusion - would suggest toning down '...intensified dietary intervention...' it wasn't really.

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

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

Quality of written English: Needs some language corrections before being published

Statistical review: No

Declaration of competing interests:
I declare that I have no competing interests