Author’s response to reviews

Title: Vitamin D and disease activity in Moroccan children with juvenile idiopathic arthritis

Authors:

Ilham Bouaddi (drbouaddilham@yahoo.fr)
Samira Rostom (samirostomsamira2003@yahoo.fr)
Dalal El badri (dalal_dr@yahoo.fr)
Asmae Hassani (hasmae00@hotmail.com)
Bouchra Chkirate (drbouaddilham@yahoo.fr)
Redoine Abouqal (drbouaddilham@yahoo.fr)
Bouchra Amine (amine_bouchra@yahoo.fr)
Najia hajjaj-hassouni (nhajjaihassouni@gmail.com)

Version: 2 Date: 17 February 2014

Author’s response to reviews: see over
Letter to the Editor of BioMed Central,

Dear Sir,

Please find attached the revised version of an article we are proposing for publication, entitled “Vitamin D and disease activity in Moroccan children with juvenile idiopathic arthritis”. Authors Bouaddi I et al, Editorial manuscript number: MS: 2791295599241451

We wish to thank you and the reviewers for your interest in our manuscript.

We hereby confirm that the article has not been published and is not under consideration for publication elsewhere. There were no financial support or other benefits from commercial sources for the work reported on in the manuscript, or any other financial interests that any of the authors may have, which could create a potential conflict of interest or the appearance of a conflict of interest with regard to the work.

The manuscript has been read and approved by all authors.

Best regards,

Ilham Bouaddi, corresponding author

Reviewer 1: Maria Teresa MTT Terreri

Major compulsory revisions

1. Are the methods appropriate and well described?
The methods are well described, but the biggest flaw of this manuscript is the absence of a control group. The authors must include a group of healthy population from the same socio-economical level, age and sex matched in order to compare with JIA patients. The term vitamin D concentrations are more adequate than vitamin D levels.
**Author’s response**
We wish to thank the reviewer for his interest.

You are right about the need to have a control group in this study but by default of financial means we couldn’t to do it.

2. Are the data sound?

**Author’s response**
We wish to thank the reviewer for his interest.

We studied the association between vitamin D and subtype of the disease and no association was found.
For the rest, you are right the corrections were made.

3. Are limitations of the work clearly stated?

**Author’s response**
We wish to thank the reviewer for his interest.

The aim of this study was to assess the relationship between hypovitaminosis D and disease activity in Moroccan children with juvenile idiopathic arthritis so we didn't study bone densitometry and PTH levels.

4. Do the title and abstract accurately convey what has been found?

**Author’s response**
We wish to thank the reviewer for his interest.

You are right the corrections were made.

**Minor Essential Revisions**

**Author’s response**
We wish to thank the reviewer for his interest.

Yes I confirm year of publication of ref 14 is 2004.

**Reviewer 2: Christina Pelajo**

**Major compulsory revisions**

1. On page 5, line 1, authors state that 21 patients were considered to have an active disease and 48% a high disease activity. How was this determined? Did you use the
cutoff values of DAS 28 that are used for RA? This was not stated in the methods section.

**Author’s response**
We wish to thank the reviewer for his interest.

As was mentioned in the section Material and methods, the disease activity was assessed by the Disease Activity Score in 28 joints (DAS28) for polyarticular and oligoarticular JIA (line 95).

2. In the results section it is mentioned that 75% of the patients had hypovitaminosis D, however in the discussion (page 6), authors say that 75% of patients had vitamin D deficiency. The authors defined vitamin D deficiency as levels <20ng/ml and hypovitaminosis D as levels <30ng/ml in the methods section, so these are different things. Terms should be consistent.

**Author’s response**
We wish to thank the reviewer for his interest.

You are right the corrections were made.

3. On page 5, authors also mention there was a significant association in the univariate analysis between tender joints and 25OHD, as well as between patient global health and 25OHD, however, it was not mentioned in the methods that these variables would be included in the univariate analysis. In the methods section, authors stated that the variables to be included would be: duration of JIA, JIA subtype, DAS28, ESR, BASDAI, and medications used.

**Author’s response**
We wish to thank the reviewer for his interest.

You are right the corrections were made.

4. There is a need for a modification of the conclusion, since the association between DAS28 and 25OHD levels was only significant in the univariate analysis, and lost once the multivariate analysis adjusted for confounders. Hence, authors cannot conclude there was an association between disease activity and 25OHD levels. You can explain in your discussion the reasons why the association may not have been found (as you did), but the final conclusion should be that there was no association.

**Author’s response**
We wish to thank the reviewer for his interest.

You are right the corrections were made.

5. Table 3 was not mentioned in the text.

**Author’s response**
We wish to thank the reviewer for his interest.

You are right the corrections were made.

6. Table 3 – the term “patient global assessment” is used instead of “patient global health”. Terms need to be consistent. On table 3 several variables (sex, age, BMI, CHAQ, patient global assessment, tender joints, and swollen joints) were included in the univariate analysis, although they were never mentioned in the methods section. In the methods section, authors stated that the variables to be included in the univariate linear regression would be: duration of JIA, JIA subtype, DAS28, ESR, BASDAI, and medications used. Besides, sex does not have any association with 25OHD levels in literature, so it should not be included in the univariate analysis.

**Author’s response**
We wish to thank the reviewer for his interest.

You are right the corrections were made.

7. The abstract needs to be revised accordingly. The results section mentions that VD insufficiency was observed in 75%, however figure 1 shows that VD insufficiency was found in 30%. In the results authors say that "25OHD levels were associated with DAS28". The direction should be clarified (negatively associated), and also that this was only significant in the univariate analysis. The conclusion also needs to be modified, as pointed out above.

**Author’s response**
We wish to thank the reviewer for his interest.

You are right the corrections were made.

**Minor Essential Revisions:**
8. The sentence on lines 31-33 of page 5 needs to be revised, as it makes no sense.

Author’s response
We wish to thank the reviewer for his interest.

You are right the corrections were made.

9. On page 6, lines 19-21 there is a sentence to explain the recruitment bias, however it needs to be rewritten.

Author’s response
We wish to thank the reviewer for his interest.

You are right the corrections were made.

10. On the same page, line 21, substitute "absence of case-control" by absence of controls.

Author’s response
We wish to thank the reviewer for his interest.

You are right the corrections were made.

Discretionary Revisions:

11. DAS28 is not validated for children, so you need to justify why this score was used, instead of others that have been validated for JIA, such as JADAS.

Author’s response
We wish to thank the reviewer for his interest.

We chose the DAS28 to assess the activity of the disease basing on these articles which reference is:


12. Why all DAS 28 components were used in the multivariate analysis, except number of swollen joints? Please make it clear in the text.
**Author’s response**

We wish to thank the reviewer for his interest.

Number of swollen joints was not used in the multivariate analysis because it was not associated in the univariate linear regression analysis. The corrections were made in the text.

13. Why was the patient’s assessment of pain collected, if this was not mentioned anywhere in the paper?

**Author’s response**

We wish to thank the reviewer for his interest.

You are right the corrections were made.