Reviewer's report

Title: Plasma calprotectin and its association with cardiovascular disease manifestations, obesity and the metabolic syndrome in type 2 diabetes mellitus patients

Version: 2
Date: 28 October 2014
Reviewer: Nete Hornung

Reviewer’s report:

The overall aim is stated clearly and is, as named in the title, to investigate the relationship between calprotectin and a number of CVD manifestations. In addition, the presence of independent predictors of calprotectin is also investigated.

Minor Essential Revisions

1. The methods are well described and are mostly explained in details. However – some information is left out and referred to as “previously reported” (p.6 line 17). This is regarding the patient cohort which is a subgroup of patients referred to diabetes clinic between 2006 and 2007 in Odense, Denmark. More than half of the patients were excluded, and neither the inclusion nor exclusion criteria are described in the manuscript. A brief introduction to the inclusion or exclusion criteria would be helpful. The control cohort consists of healthy blood donors. Here are exclusion criteria described, which is a paradox since the samples were from a cohort of healthy blood donors. Blood donors must always be healthy. This should be clarified.

Minor Essential Revisions

2. The system is serum and plasma from donors and patients respectively. Why was this chosen? The comparison of the two materials is not shown in the manuscript but it is stated that there were no difference. The comparison data should be presented since some calprotectin assays give different results on serum and on plasma.

Discretionary Revisions

3. Results are presented both in the main text and in tables and figures. Both the tables and figures are clear and logical and easy to read. Unfortunately, a substantial amount of the results are presented both in the text AND in the table or figures. This is unnecessary and makes part of the result section difficult to read (p. 11, line 12 to p.12 line 14 are mainly repetitions of what is clearly shown in the tables and figures and legends also).

The discussion section is 4,5 pages and is well structured and presents conclusions and hypothesis, that are supported by the findings in the study. Also
the perspectives are logical and well presented. The discussion is comprehensive and could probably be shortened and sharpened, without compromising the readability.

Minor Essential Revisions

4. Question: Do 266 of the 305 patients have the metabolic syndrome (p.10 line 16)? In table 2 it is stated that 243 had metabolic syndrome.

p. 11 line 14: Height is inversely associated according to table 2.

p.11 line 20: Height is not included here although it is stated that “All the parameters.....”

p. 11 line 26 and p.12 line 1 – not all variables are shown in figure 1. Either the text or the figure should be changed.

There are quite a few grammatical errors – especially pluralis/singularis matters (example: p.4 lines 19 – 24)

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

**Declaration of competing interests:**

I declare that I have no competing interests