Reviewer's report

Title: The role of abdominal obesity in explaining the high CRP in Indigenous Australians relative to the general population: a cross-sectional study'

Version: 1 Date: 14 June 2010

Reviewer: Altan Onat

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Authors studied cross-sectionally the levels and relationships with abdominal obesity of CRP in 512 Indigenous Australians relative to 2823 participants of the AusDiab Study. They found nearly twice as high levels than in the general population which was largely related to elevated waist circumference but not to BMI. Elevated CRP was more likely in women than men even after multivariable adjustment. Authors concluded that high CRP levels in urban Indigenous Australian women likely reflect increased vascular and metabolic risk. The manuscript is well written and, despite the comparatively small sample size of Indigenous Australians and the cross-sectional design, pinpoints to an important public health issue previously documented. Important relevant references are lacking.

Following concerns need to be addressed.

1. Findings of greatest interest relate to the multivariable logistic regression for elevated CRP. These should be tabulated separately in sexes, giving details. If needed, a second model may well be used to include analysis with HOMA as an independent variable.

2. The sex-specific association of current smoking with elevated CRP needs to be clearly stated in the findings. This seems to confirm the similar relationship among Turkish men and women (Onat A et al. Metabolism 2008;57: ). and merits a comment in the Discussion

3. The special influence of female sex (Onat A et al. Metabolism 2008;57:207), abdominal rather than overall obesity (Onat A et al. Int J Obes 2004;28:1018), yet greater role in women of overall obesity in elevated CRP levels and in increased vascular and metabolic risk (Onat A et al. Nutrition 2010;26:382) have been previously reported among Turkish adults in prospective studies.

4. The role of enhanced chronic low-grade inflammation in the recently developed concept of HDL dysfunction (reviewed in Onat A et al. Metabolism 2010;in press, PDF attached) deserves to be mentioned briefly. The very high prevalence of pre-diabetes and diabetes among (young) Indigenous Australians needs to be potentially linked to the high CRP levels.

Minor points:

1. Page 8: Please refer to dependent variable rather than “outcome”. Page 11: “we” is missing in the sentence.
2. Reference 4 has two different years of publication.
3. Fig. 1 might be omitted.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.