Reviewer’s report

Title: Relationship between serum uric acid and internal carotid resistive index in hypertensive women: a cross-sectional study

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Reviewer: Giuseppe Mule'

Reviewer’s report:

This is a good study which seems to support the concept that serum uric acid (SUA) may be related to cerebral arteriolopathy.

The manuscript is written in a clear and concise style, the tables are appropriate and of acceptable quality, the interpretations and conclusions of the authors seem to be reasonable. Moreover, the references are up-to-date and all-inclusive.

However, I have some comments and questions.

Statistical analysis

(Page 6. Line 143):

The terms “parametric and nonparametric” used to describe the statistical distribution of the variables are employed inappropriately. The terms parametric and non parametric refer to the statistical methods used to process variables with and without gaussian distribution, respectively.

Therefore, the sentence may be reformulated as follows: “Continuos variables with and without gaussian (or normal) distribution are presented ……”. (Pages 6-7. Lines 146-147 and Line 149): see the previous comment.

Results


May you clarify how you assessed the correlation between carotid variables and antihypertensive medication or statins?

Discussion

It is possible that carotid resistive index, like renal resistive index, is more a marker of systemic vascular damage, rather than an organ-specific marker. Therefore, the hypothesis according to which the findings of the authors suggest that SUA may be related to intracranial microangiopathy in female gender (Abstract; lines 46-47 and Discussion page 9; lines 200-201) may be accepted with some caution.


Another potential reason of the discrepancies concerning the influence of SUA
on structure and function of large arteries may be the fact that in many studies aortic stiffness, instead of carotid elastic properties, was studied. Even if similar, the two arterial districts may be somewhat different from a structural and functional point of view (see also Paini A et al. Carotid and aortic stiffness: determinants of discrepancies. Hypertension. 2006; 47: 371).

**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