Reviewer's report

Title: Endothelin-1 plasma levels in patients with osteoporosis

Version: 1 Date: 23 March 2005

Reviewer: Peter Vestergaard

Reviewer's report:

General

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

They find no overall difference in endothelin levels in patients with osteoporosis, osteopenia, and normal bone mineral.

I have a number of reservations for this study:

1) More detail should be provided for the inclusion procedure: How many patients were screened, were any patients excluded, and how many, and for what reasons?
2) The potential aspects of selection bias in relation to what kind of patients was referred, and the patients excluded need to be discussed.
3) More detail should be provided for the assay used: coefficients of variation should be provided.
4) Regarding the point raised above, a potentially severe problem arises when one compares the results of the study with the description of the assay used by the manufacturer. On their website (http://www.caymanchem.com/pdfs/583151.pdf), the manufacturers state that the assay cannot measure endothelin within the normal range seen in humans (<1 pg/ml), and that measurements in the range <50 pg/ml needs special care with respect to purification. The manufacturers state that only elevated levels of endothelin can be reliably measured by the assay. Yes the authors present values from supposedly normal subjects in the range of 100 pg/ml. This needs clarification and discussion.
5) The authors measure serum levels of endothelin. Normally endothelins work locally, in this case in the skeleton. The systemic circulation may thus not entirely or reliably reflect local changes in the bones. The authors need to discuss this limitation, and whether systemic measurements do in fact reflect local changes in the bones. E.g. is the half-life of the endothelins so short, that they may not enter systemic circulation.

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

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Discretionary Revisions (which the author can choose to ignore)

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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