Reviewer's report

Title: Age-related increases in parathyroid hormone may be antecedent to both osteoporosis and dementia: a clinical study

Version: 2 Date: 29 September 2008

Reviewer: Jun Iwamoto

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Braverman et al. have reported that lower BMD and prolonged P300 in patients with higher PTH levels may suggest that elevated plasma PTH coupled with prolonged P300 latency may become putative biological markers of both dementia and osteoporosis. The paper seems to be well written. However, there are several concerns before publication.

Comments

1. When assessing serum PTH levels and BMD, please include factors that could affect them in the analysis; age, vitamin D and calcium supplementation, smoking, alcohol consumption, steroid use, family history of osteoporosis, physical activity, drugs to control bone and calcium metabolism, rheumatoid arthritis, other diseases that cause secondary osteoporosis, and sex hormones, etc. Because menopause in females results in marked bone loss, the data analysis would be separated in males and females and in premenopausal and postmenopausal women.

2. Please detail the PTH and BMD measurements. Which method was used to measure serum PTH levels? Which skeletal site was assessed? What kind of DXA was used?

3. The reference #28 may be missing.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

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

Declaration of competing interests:

I declare that I have no competing interests.