Reviewer's report

Title: Low bone mineral density is strongly associated with low-energy distal radius fractures in middle-aged and elderly men. A case-control study

Version: 1 Date: 2 December 2010

Reviewer: Isam Atroshi

Reviewer's report:

This study about the association between low bone mineral density and low-energy distal radius fracture in men confirms the findings of the few previous studies that have explored this important topic. Despite the small sample size being a limitation, its findings are interesting and useful.

Background

It would be appropriate to add reference number 16 to the references supporting the statement “In a few studies osteoporosis has been …..”

Methods

Some description of the population is needed, population size, urban/rural?

Why did the authors choose to include only one age-matched control man per patient (considering that some important differences, e.g. weight, were subsequently found)? A supporting reference for this choice would be appropriate here.

Statistics

It is unclear how the logistic regression was performed, which variables were included in the model that estimated the odds ratio for osteoporosis? In Table 2 it seems too many variables have been analyzed considering the small number of patients.

Results

How many fractures were excluded (e.g. high energy, etc)?

Could the authors analyze whether patients who did not attend BMD measurement differed from the participants in characteristics other than age?

Discussion

Page 9, paragraph 3, second sentence “In one of these studies …” it seems the citation is incorrect because this is not what reference 16 reported.

The authors state that falls in last year were not associated with fracture risk but the difference (41% of the patients vs 18.5% of the controls) although statistically not significant is a relatively large difference suggesting inadequate power.
It would be interesting to discuss possible explanations to why “living alone” was associated with fracture.

A few minor language corrections needed.

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

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

'I declare that I have no competing interests'