Reviewer's report

Title: Does Alendronate Reduce the Risk of Fracture in Men? A Meta-analysis Incorporating Prior Knowledge of Anti-Fracture Efficacy in Women

Version: 1 Date: 9 November 2004

Reviewer: Robert P. P Heaney

Reviewer's report:

General

This is a report of a meta-analysis of two published trials of alendronate use in men, using Bayesian statistical methods incorporating prior knowledge of efficacy in women to derive efficacy estimates for men. Given the prior knowledge that all the amino bisphosphonates operate by similar mechanisms, it is not clear why the authors confined their analysis to alendronate and did not extend the meta-analysis to the field of the amino bisphosphonates, generally.

While the authors attempt to explain their use of the Bayesian approach, the justification was not clear to this reviewer. Knowledge of efficacy in one group is an obvious explanation for why one might try an agent in a second group, but it is not clear how that prior knowledge alters what might be found. In this specific application, while the Bayesian methods gave results “similar” to those of the more classical “frequentist” methods, the odds ratios were somewhat less favorable to alendronate using the Bayesian approach. Why should that be? At very least, the Discussion section of the paper needs a sentence that starts, perhaps: “Our approach produced odds ratios somewhat less favorable to alendronate than the classical, frequentist approach because . . .”

The authors appear to have used the intention-to-treat criterion as a knee-jerk reflex. What was its justification in this instance? Was their intention to estimate the actual efficacy of the drug, or the effectiveness of its prescription?

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

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

- The word “data” is a plural form and should take the appropriate verb number throughout the manuscript.
- Page 6, line 7 up from bottom – “mail” for “male”.
- Page 9, line 6 – The word “men” should be stricken.
- Fig. 1 in my version of the manuscript was not readable. If it is critical for evaluation of this manuscript, then I need to be provided with a legible copy.

Discretionary Revisions (which the author can choose to ignore)
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: Acceptable

Statistical review: Yes

Declaration of competing interests:
I have no competing interests.

Robert P. Heaney, M.D.