Reviewer’s report

Title: Safety of intramuscular influenza vaccine in patients receiving oral anticoagulation therapy: a single blinded multi-centre randomized controlled clinical trial

Version: 2 Date: 31 January 2008

Reviewer: Robert B Couch

Reviewer’s report:

This is a brief report on the safety of intramuscular vaccination (Influenza vaccine) of persons receiving oral anticoagulants with a focus on a bleeding risk. It supplements available data indicating this is a safe procedure. This reviewer was unaware that the subcutaneous route for influenza vaccine is apparently recommended by many to avoid a bleeding risk. The study is randomized and well analyzed.

It would have been appropriate to introduce the subject by saying something like: "Influenza vaccines are recommended for administration by the intramuscular route. However, many physicians use the subcutaneous route for patients receiving an oral anticoagulant because this route is thought to induce fewer hemorrhagic side effects." Then the rationale for the study is very clear up front.

Page 3, para 1. This paragraph needs rewording. No. 1 is incorrect. It is true that there are very few published comparisons of the subcutaneous (sc) route and intramuscular (IM) route but there was extensive experience with high sc reactogenicity preceding zonal purification and subunit vaccine development. Those vaccines exhibited less reactogenicity after sc administration. With the introduction of influenza A/H3N2 vaccines, extensive testing focused on immunogenicity but observations by many led to a recommendation for IM injection since fewer reactions were encountered. Some comparative data from this time indicated no differences in immunogenicity. For IM injections, needle length is important (> 1 inch), particularly to ensure IM injection of many men and women with a degree of obesity. Three references readily available to me on this subject are:


Page 3, para 1, no. 2. This must be an error. Adjuvants are not involved in the consideration although I agree with the statement. Ref. 2 is ID versus IM; ID produced more local reactions (well known fact) although ID is not a recommended route.

Table 3 can be dropped and stated as not different in the text.

Page 4, para 5. “Elementary skin lesions” is not understood by this reviewer and will not be understood by many. Delete the word?

Page 6, para 4. "punctuation score" is not understood. Delete the word?

What next?: Accept after minor essential revisions

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:

No competing interests