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: 28 January 2008

Reviewer: Zichria Zakay-Rones

Reviewer’s report:

Minor Essential Revisions

This is a randomized controlled single blinded and multi-center clinical trial, consisting of the total of 229 patients (129 vaccinated i.m and 100 s.c). The objective of the trial is to determine the safety of intramuscular influenza vaccine in patients receiving oral anticoagulant therapy. This is a descriptive work dealing with a very specific and defined issue, but nevertheless, gives an answer to a very significant problem, since the population under oral anticoagulant treatment is increasing constantly. Moreover, these patients belong to one of the risk groups for which annual influenza vaccination is recommended.

The methods are appropriate and well described and most of the data are sound and the authors state some of its limitations (like the number of participants).

There are a few points that the authors should correct:

The average age of the patients in the study is over 73 years and they have probably many underlying diseases that put them under other treatments beside the oral anticoagulant. There is no reference to this, also not to the fact that sometimes the anticoagulant treatment is added to aspirin, and also dosage of the anticoagulant is not referred to. (Were all the participants on the same dosage, it would be worth indication)

In table 1: is the difference significant between the percentages of patients with INR < 2: 23% in the i.m group and 32.6% in the s.c one? Because it is mentioned in the text that pre IRN levels have no bearing on the results.

There are several works cited in the literature comparing intra muscular to subcutaneous vaccination of influenza that the author should refer to.

In a trial of subunit influenza vaccine, im administration resulted in fewer side effects than did vaccine given by the sc route, and immunogenicity was similar for both routes. Ruben FL, Jackson GG. A new subunit influenza vaccine: acceptability compared with standard vaccines and effect of dose on antigenicity. J Infect Dis 1972; 125:656

A comprehensive study of 720 vaccinees 73 years old vaccinated im or sc monitoring both reactogenicity and serological response was published in Vaccine, 24, 20 March 2006, 2395- 2402 by Ian F. Cook. Ian Barr, Gunter Hartel, Dimity Pond and Alan W. Hampson.
The conclusion of the authors is well established in the study: Intramuscular vaccination of influenza (the routinely used route), especially when there are less adverse effects than following the sc route of administration, is safe in patients under oral anticoagulant treatment without particular risk, provided that the method used in the study is adhered to (using a needle with a small caliber, smaller than is usually being used).

**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:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

'I declare that I have no competing interests'.