Reviewer's report

Title: Risk of new acute myocardial infarction hospitalization associated with use of oral and parenteral non-steroidal anti-Inflammation drugs (NSAIDs): A case-crossover study of Taiwan’s National Health Insurance claims database and review of current evidence

Version: 2 Date: 9 September 2011

Reviewer: Emil Fosbøl

Reviewer's report:

This work by Dr Shau and colleagues is an extremely thorough analysis of the cardiovascular safety of NSAIDs. The paper is well written and this reviewer only has few comments.

Major comments:

1. The method used in this analysis (case-crossover design) is very well chosen for this purpose but rarely used. It is comforting to see sensitivity analyses for this method also by varying the time periods (both case and control). The authors could consider using more than one control period. In addition, the authors need to justify why they use the case-crossover approach and not the case-time-crossover where trends in use are accounted for.

2. The data seem to include information on dose, and the results would benefit tremendously from adding a dose-response analysis (high vs. low dose).

3. The results, to me, raise a clear concern for confounding by indication. The conclusions are very strongly worded that the parenteral drugs appear hazardous. The authors need to discuss the bias of indication better.

Level of interest: An article of importance in its field

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