Reviewer's report

Title: The association between air travel and deep vein thrombosis: Systematic review & meta-analysis

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Reviewer: John H Scurr

Reviewer's report:

This is a well prepared manuscript, suitable for publication with minor revision to the conclusions.

There is considerable interest in this topic. The author has identified 254 studies of which only 10 were suitable for analysis. The number of cases analysed is too small to draw significant conclusions. I have no problem with the statistical approach for the author's methodology.

The authors themselves identify the problems associated with this analysis.

Their conclusions suggesting no definite evidence of long haul travel, including air flight, increases the risk of DVT is inaccurate. In their discussion they state that air travel of three hours or more is no associated with an increased risk of DVT - this is no long haul.

I would accept that the clinical significance of asymptomatic DVT needs to be ascertained.

In analysing these results the Kraaijenhagen study seems to off set the other studies. When the Kraaijenhagen study was reanalysed looking at passengers who travel for more than ten hours there was an increased incidence. That point does not appear to be borne out in these results.

The authors accept that there is insufficient power in this study to make meaningful conclusions. On the basis of their analysis they suggest that a study of up to one million air travellers plus controls would be needed to confirm an increase risk. This figure is based on all travellers, over all distances and takes no account to the fact that the numbers would be less if one studied passengers travelling for more than 8 hours.

Declaration of competing interests:

None