Reviewer’s report

Title: Risk of tuberculosis in patients with diabetes: population based cohort study using the UK Clinical Practice Research Datalink

Version: 1  Date: 1 April 2015

Reviewer: Lourdes Garcia

Reviewer’s report:

This is a very interesting cohort study analyzing 222,731 patients with DM compared with 1,218,616 controls without diabetes. The authors found a small risk for TB among patients with DM (RR 1.30 (1.0-1.67). They found that patients with the lowest and highest rates of chronic disease management had a higher risk of TB.

This is a well-designed, well analyzed, well written study.

I have the following general comments that I consider should be clarified to better interpret results.

1. The authors linked the CPRD with the HES. They explain that the HES contains outpatient clinic attendances from 2003. Please explain if there could be TB cases that had been diagnosed among outpatient clinic attendances before 2003 that could have been missed.

2. The authors include only incident DM with median follow up of 4.4 years after diagnosis. This might have introduced a bias towards an overall cohort of DM patients with fewer complications and less probability of severe disease. Therefore even though association with DM and TB was adjusted for consultation rate, total number of consultations and prescription of insulin, this would partially explain differences with other cohorts. If this is true, I suggest that this is discussed in the Discussion section.

3. Some guidelines recommend treatment for latent TB for patients with DM. Is this the case for the UK? Please explain how many patients with DM could have received treatment for latent tuberculosis and how this recommendation would affect results.

Minor points.

In table 4, explanation of superscript for Label “Tuberculosis rates” is missing.

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.