Reviewer's report

Title: Efficacy of omalizumab (Xolair) in patients with moderate to severe asthma in Taiwan: a retrospective, population-based database cohort study

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Reviewer: Neil Thomson

Reviewer's report:

General comments

Based on evidence from RCTs the recombinant monoclonal anti-IgE antibody omalizumab has been shown to be is an effective treatment for moderate to severe allergic asthma. Several observation studies from different countries have reported the efficacy of omalizumab when used to treat 'real-life patients' with allergic asthma. The manuscript reports the results of an observational study of omalizumab use in Taiwan using data from their National Health Insurance Research Database. The main findings were that patients who received omalizumab treatment for over 4 months had fewer exacerbations, ER visits and hospitalisations as well as reduce use other medications. The results confirm the findings from previous observational studies, although this is the first report that has used a national health insurance research database. There are several points that the authors should consider.

Minor essential revisions

1. Baseline treatment

Nearly all the patients were receiving chronic oral corticosteroids at baseline (92.4%). I think that this point should be highlighted in the report by adding the term 'chronic oral steroid dependent' to the title 'Efficacy of omalizumab (Xolair) in patients with moderate to severe predominately chronic oral steroid dependent asthma in Taiwan....... and to the abstract.

2. Placebo effect

RCTs of omalizumab treatment have shown improvements in clinical outcomes in the placebo arm of the studies. The authors should acknowledge that the improvements in clinical outcomes reported in their observational study may be due other factors than treatment with omalizumab including regular asthma clinic review and improved adherence with asthma therapies.

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:**

'I declare that I have no competing interests'