Reviewer's report

Title: Otitis media in children vaccinated with either 7-valent or 10-valent pneumococcal conjugate vaccines: a cross sectional comparison

Version: 1
Date: 18 April 2014
Reviewer: Paola Marchisio

Reviewer's report:

The authors compare the prevalence of different types of OM in high risk Australian Indigenous children in relation to the type of pneumococcal vaccine. The study is interesting but many points need to be taken into account.

MAJOR REVISIONS

Abstract, page 2, line 47. How was OM defined?

Abstract, page 2, line 71. The increase of OM with effusion should be included in the Results and also in the discussion without citing again the numbers

Methods, page 5, line 121. Were parents asked to have their child examined if he/she was ill? Or independently from his status?

Methods, page 7, line 154. AOM: any bulging without any symptom would be AOM? If this is the case, then this type of AOM does not equate the definition of AOM of most guidelines, including the latest AAP 2013, which includes also “mild bulging of the TM and recent onset of ear pain or intense erythema of the TM”.

Methods, page 8, line 172. No questions about the father habit to smoke? And why was the information regarding TMP asked only for the mother and the siblings?

Results, page 10, line 220. “97% had at least one ear successfully assessed”. Does this mean that if only one ear was checked and this was normal then the other one was considered normal as well? Or if the assessed ear was pathological, then the other one was pathological? And how much severe?

In other words, how was the “other” ear considered? How many were the children with both ears checked? Were all the children having one normal ear considered to have with normal bilateral ears?

If the children with a bilateral assessment were only few, then stating that “less than 10% had bilateral normal middle ears” seems to be inappropriate.

Results, page 10, line 224. It would be interesting to know if OME was bilateral (more severe) or unilateral (mild). The comment about the increase of OME should be modified accordingly.
Results, page 11. Why a multivariate analysis was not performed regarding risk factors?

Discussion, page 13. The lack on nasopharyngeal sampling has to be included as a limitation.

Table 1b: a column with p value should be added.

Table 1b and Table 2b: The age groups should be better detailed: no overlapping in age groups (6-9 and 9-12 should be 6-8 and 9-12 if this is the case) should be present in order to be sure of the exact age of the examined children.

MINOR REVISIONS

Abstract, page 2, line 64. Prevalence … “were”. I would say “was”.

Abstract, page 2, line 64. Most … I would replace with “most relevant”

Abstract, page 3, line 72. I would say “combined” and not “combine”

Methods, page 7, line 167. Why were 5 weeks chosen (instead of the usual 4 or 2 weeks)?

Methods, page 9, paragraph on Ethical approval and funding. The first sentence is a repetition of the sentence included in the first paragraph of the methods. The sentence of funding could be included also in the first paragraph.

Table 1a. The % sign close to the numbers in the column might be deleted because it is included at the top of the column.

Table 1b. The % sign close to the numbers in the column might be deleted because it is included at the top of the column

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

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

**Declaration of competing interests:**

I have received honoraria and travel grants from GSK Biological from 2010 to 2013