Reviewer's report

Title: Epidemiology of serotype 19A isolates from invasive pneumococcal disease in German children

Version: 2 Date: 20 December 2012

Reviewer: Shahin Oftadeh

Reviewer's report:

The article is overall good and worth publishing, although it needs some editing before being published as it is too wordy and has lots of repetition of results in text, tables and discussion.

Here is some of my comments/suggestions on different parts of article (all category 2 or 3).

Abstract:

• It should be stated how many serotype 19A isolates were studied. Also it is not clear that CCs referred to are all serotype 19A.

• I suggest line 5 of abstract to be changed to: “….in 2010/11. Eight Clonal Complex (CC) and groups accounted for….all serotype 19A isolates…..respectively. While three CCs….. after vaccination, four CCs and several STs first appeared after vaccination…….. could be traced to recent imports from the USA, UK and India.”

• Delete the sentence: “Six more…. …..after vaccination” (abstract should only highlight the most important data).

Introduction:

• Introduction is a bit too long and only a single paragraph. It needs editing into more logical sequence and concise points.

Materials and methods

Study material

• Spell out ESPED

• Explain briefly what is meant by “capture recapture”

• Use “approximately”: instead of “roughly about”

Susceptibility testing

• Specify the breakpoints for susceptibility interpretation to avoid confusion. (What are the breakpoints in the current CLSI criteria?)
• Specify the definition of MDR.

Antibiotic and vaccine use

• The last sentence (page 6): (the data were expressed….) is not clear and is hard to understand! What does …"day using ATC/WHO” mean?

Results

• There are lots of unnecessary repetitions of data in tables -select the most important parts to include in the text. Remove detailed data from the text where you have referred to tables and instead just interpret the figures in your text as increased or decreased- significantly or not significantly….so on.

• Page 8, first paragraph: I think isolate number should be reported from the year that your study starts with (1997-98); although the numbers slightly drops in 1998-99.

• Page 8, first paragraph: Check the average number of isolates/year (3122total/14years=223).

• Page 8, first paragraph, line 6: Add percentage of proportion (10%) during the post vaccination…

• Page 8, second paragraph: How were Pen R CSF isolates distributed over time after immunisation was introduced? Was it more in 2006-11?

• Line 5 of Paragraph 3- page 8: add: …increased moderately (but not significantly)…

• Paragraph 3 page 8: I suggest remove all the percentages in parenthesis (which are in table 1) to avoid repetition Ex: 28 vs 38%, NS; 44.8 vs 48.5 %...)

• The second last paragraph Page 9: summarise the paragraph to: eight CCs or groups accounted for ….before and after vaccination respectively. Three CCs and 7 other STs were not detected After vaccine introduction. Clonal complexes 81…. (Table2). [spell out CC in the beginning of the sentence]

• The last paragraph Page 9: Change the first sentence to: The increased proportion of MDR isolates was mainly due to STs belonging to CC230 and CC320.

• The last paragraph Page 9, line 3 &5: You don’t need to repeat the MIC categories here if you include them in the methods.

• The last paragraph Page 9 line 6: Remove the STs from the second last sentence: ST 276 (2)...and so on as they are in the table.

• Page 10 paragraph 2: As azithromycin is a macrolide - and in the next sentence you are comparing antibiotic classes - it should be included in macrolide class,
not separate.

• Use “the number of marketed doses of PCV7” instead of “the amount of…” Also in discussion where you are referring to dose of vaccin use: “number of…”

Discussion

• A major limitation of this study is that referral of isolates was incomplete. Were those referred representative? Have referral patterns (e.g. from different labs) changed over time? It is surprising that overall numbers of referred isolates have not fallen since 2006- it suggests a higher proportion being referred (and potentially biased towards antibiotic resistance). This needs to be discussed in this section.

• Repetition of results in discussion is unnecessary (first paragraphs page 11 and 12). Also some of the numbers in page 12 don’t match with the table – check which are correct.

• Page 13 second paragraph: ….”a niche” instead of “an empty niche”

Tables and figures

Table 1: I suggest include the percentage of resistance for each antibiotic

Table 2: you have typed camas (,) instead of decimal pointing % column (check the text for this typo as well).

Table 3: you have typed pre-vaccination in both sections the second one should be post-vaccination.

Table 3: you have typed camas (,) instead of decimal point for PEN MICs

Tetracycline and cephalosporin column colour don’t have enough contrast, I suggest you change one of them unless it will be colour printed.

Level of interest: An article of importance in its field

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