Reviewer's report

Title: Nasal Carriage and Antimicrobial Susceptibility of Staphylococcus aureus in healthy preschool children in Ujjain, India

Version: 1 Date: 29 July 2010

Reviewer: Gili Regev-Yochay

Reviewer's report:

This manuscript reports the results of a cross-sectional study of nasal S. aureus carriage in healthy children < 5y who came in for vaccination in India. The authors report a low prevalence of S. aureus carriage in their study population, with no significant difference in the different age groups. The only variables that predicted higher carriage rates were child attending school or preschool, and having a large family.

The paper is well written and data from India regarding S. aureus carriage is currently scarce, so that this report is important. Yet, some essential revisions are required:

Major compulsory revisions:
1) The conclusion of the abstract and the MS should be rephrased, the fact that a relatively low carriage rate was found does not necessarily reflect on disease. Nothing regarding disease was reported and these conclusions are not based on the current study.
2) Methods: It appears that a multivariate analysis was performed, yet it is not described in the statistical analysis methods. Give detail on which variables were entered, how was this determined, etc..
3) Refrain from using 'Risk factors', since this is a cross sectional study, only factors associated with S. aureus carriage can be determined, or predictors of S. aureus, but the study cannot define risk factors.
4) Page 13 4th paragraph: the sentence starting with: "Therefore, the main strength of the study..." is incorrect. The study did not identify risk factors, but rather factors associated with carriage. Furthermore, I dont see how this is the main strength, since the only predictor was attending school or preschool, which is not a novel finding.
5) Table 1 is unnecessary, totals can be added to Table 2 and thus it will include the data from Table 1.
6) Tables 3 +4 as are presented are not very effective. Perhaps a figure with the prevalence of different susceptibility patterns will be more useful?

Minor essential revisions:
1) When describing the antibiotic sensitivity pattern - more relevant is the pattern
of antibiotic resistance among different isolates, not just the resistance to a single antibiotic. It seems like most MRSA observed, is more the HA-MRSA type, but unclear due to the way it is presented. How many are MDR? How many only resistant to b-lactams? how many clinda-inducible...

2) The fact that MRSA was not definitely determined using mecA, is a major disadvantage. Can this be tested and added?

3) Page 13 3rd paragraph: "In MRSA isolates..." is unclear. Needs to be rephrased.

Discretionary revisions:

1) The very low prevalence rate, especially in the very young, is surprising. Would be interesting to see the prevalence among the very young - <1 month, or <3 months and then up to 6 month. Is it still so low?

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I declare I have no competing interests.