Reviewer's report

Title: Burden and Risk Factors of Invasive Group B Streptococcus Disease among Neonates in a Chinese Maternity Hospital

Version: 2 Date: 31 Oct 2018

Reviewer: Ian Gassiep

Reviewer's report:

While this draft is much improved from previous there are still a number of issues regarding grammar, sentence structure, and writing style. I believe the substance of the article is worthy of publication, but the manuscript requires extensive revision.

General: I note there is no mention of antibiotic timing. I note guidelines such as The American College of Obstetrics and Gynecologists state that the optimal timing is 4 hours prior to delivery. This appears to be important information, and if not assessed then should be stated in the limitations section.

Line 75: "IAP. (5)" ; IAP (5). Move reference and punctuation.

Line 76: "between whether or not resident mother", would clarify as not being a resident of China.

Line 75 - 77: "However, as we found the disparity in incidence and mortality of EOD-GBS between whether or not resident mother, and between women who did and did not undergo membrane stripping, we also assessed these factors." This information is partially describing the result of the study and not just the methodology. Could this be reworded or simply include "resident status" and "membrane stripping" as factors assessed? Also, this is the first use of the term EOD in the text and should be written in full.

Line 81: "fluids.(2)"; move punctuation fluid (2).

Line 84: "Cases were identified by daily surveillance of the paediatric wards and microbiology services." This was a retrospective study, but the methodology is seemingly prospective. Please clarify.

Line 91 & 92: remove extra spacing between words.
Line 98: remove capitalisation of "Immediate". Suggest: "...and immediate Gram stain was performed."

Line 99: "Other swabs were plated", what "other" swabs do the authors mean?

Line 101 - 103: "GBS was identified by Gram staining as positive streptococci and presumptive identification by the CAMP test as an arrowhead-shaped zone of complete haemolysis." Would suggest rewording this sentence. Consider "Presumptive identification of GBS was based on Gram stain and a positive CAMP test, determined by an arrowhead-shaped zone of complete haemolysis."

Line 107 - 108: "During the data collection, the one-child policy was in place, and few prior children were noted." The last part of the sentence is confusing. I would suggest rewording. Consider "during the study period the one-child policy was in place and as such may effect risk calculation." This does not need to be exactly as I have written it, but needs to be clearer.

Line 144-145: "Both membrane stripped and non-resident mothers are occurred in 28/65 (43.1%) EOD cases." Consider rewording such as "in total 28/65 (43.1%) EOD cases occurred in either non-residents or patients undergoing membrane stripping." Again, this does not need to be the exact same.

Line 148: "...whereas previously described risk factors." This part of the sentence does not make sense. The sentence appears incomplete?

Line 148: "There are 5 increased risks were..." please reword.

Line 154: "...seven identified factors..." inconsistent use of words and numbers. Also, is it 7 or 8 risk factors?

Line 185: "...to prevent infection, though the practice 186 were not successful". This sentence could be removed.

Line 187: "differed antibiotic", change to "different".

Line 188: "regiment", change to "regimen".
"The common dosing regiment of penicillin G is 3 million units intravenously every 8 hours. After rupture of membranes for 12 hours, oral erythromycin enteric capsules were administered to prevent infection. Combined use of antibiotics can also be seen." Please reword this paragraph. Was penicillin G given for 12 hours after rupture of membranes? Did every patient who was treated receive oral erythromycin?

"none was significant" change to "…none were significant."

"Treatment was discontinued due to meningitis, intracranial haemorrhage, collodion baby, and prematurity with respiratory failure." This sentence seems unclear. Why was treatment discontinued in a patient with meningitis or other diagnoses?

"mortality.(2, 6)" change punctuation "mortality (2, 6)."

"…B streptococcal disease in 1996, 2002, and 2010(5, 7, 8)…" Consider putting all references at end of sentence.

"(9-12), but there is a lack of systematic research." Consider putting references at end of sentence.

"Forty infants with invasive GBS infection were found over a 4-year period (2010-2014) (11)." Were only 40 cases found throughout China? Please clarify or reword this sentence.

"…could go to other local hospitals except our hospital." Suggest removing "except our hospital." Suggestion "…may present to other local hospitals."

"weak awareness", suggest changing to "limited awareness"

"Similarly, eleven infants with GBS-positive throat swab cultures", could you please include the percentage?

"(CPS) were thought to be…" suggest "are thought to be…"
Line 248: "Neither VII nor IX was detected in China (19)." Suggest "Neither serotype VII nor IX have been detected in China (19)." Also, was it or is it expected that these two serotypes are associated with GBS?

Line 250 - 252: "For example, the high burden of invasive GBS disease is partly due to the heightened risk for LOD in infants born to HIV-infected women(21)." While this is a good example this was a South African study. Is the prevalence of HIV and HIV undertreatment similar in China and South Africa? This sentence should be reworded accordingly or omitted.

Line 257 - 259: "Especially when membrane stripping fails to result in delivery in> 18 hours, we suggest that providers consider the use of antibiotic prophylaxis". Does this mean that the authors would not recommend prophylaxis if stripping results in delivery within 18 hours?

Line 259 - 260: "However, when penicillin, ampicillin, or cefazolin is administered before delivery, the dose and duration must be precise." This seems like an obvious statement. Does this mean that if using Vancomycin due to B-lactam allergy that the dose and duration do not need to be precise? Do the authors mean that it should be according to a specific guideline or management protocol? Please reword or remove.

Line 274 - 275: "The lower case fatality rate of EOD cases may contribute to prompt diagnostic evaluation." Do the authors mean that the prompt diagnostic evaluation leads to a lower fatality rate? The current sentence suggests that the lower fatality rate is the cause for prompt evaluation which does not make sense. Suggest rephrasing.

Line 277: "...or poor outcomes(16), no important..." suggest moving reference to end of sentence.

Line 283: "we conclude that many 284 cases of neonatal GBS disease can be prevented." Should this sentence not be in the conclusion given it states, "we conclude"?

Line 290 - 291: "This retrospective, single institution study has incomplete ascertainment of various variables that brought it limitations." Suggest removing from conclusion and adding to limitations in the discussion section.

Line 291 - 293: ". However, our findings can improve the awareness of neonatal GBS infection and lay a cornerstone to ensure accurate detection of the burden." Suggest rewording, "Our findings can improve awareness of neonatal GBS infection and lay a cornerstone to ensure accurate representation of the burden." Again, this is simply a suggested sentence structure.
Table 3:

Spelling:

erythromycine should be erythromycin (no capitalisation and no "e" at the end) cefazoline should be cefazolin

Figure 1:

The title of the figure is "The incidence of…" therefore the green graphical representation of "incidence" should be labelled as "total incidence" or "combined incidence"

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
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I recommend additional statistical review

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