Reviewer's report

Title: Evaluation of procalcitonin for diagnosis of neonatal sepsis of vertical transmission

Version: 2 Date: 27 July 2006

Reviewer: Daynia Elizabeth E Ballot

Reviewer's report:

General

Thank you for inviting me to review the above manuscript for possible publication in BioMed Central. I have no competing interests.

My comments are as follows:

A· The question posed by the authors is not completely original, but is current and still under evaluation. I therefore feel that their contribution is valuable.

A· The following points regarding subjects and methods need to be clarified:

o How was group 1 selected? Were these normal neonates selected as controls? Were they admitted for other reasons, if so, what? Why was a sepsis evaluation done in this group of well infants without clinical signs of sepsis?

o What was the total number of deliveries during the study period?

o What is the neonatal unit as opposed to the neonatal intensive care unit?

o Were all infants in the study term babies?

A· In group 2A, it is unclear whether all babies born to GBS mothers were included or only those GBS exposed babies who were symptomatic or with positive surface cultures.

o I am unclear why group 2C infants were excluded and not just part of 2B, as respiratory symptoms may be due to sepsis. Is this related to the comments in the discussion that hypoxia due to RDS can cause a rise in PCT? Were other infectious markers such as CRP negative in this group?

o What about possible contamination where a completely asymptomatic infant with no markers of infection has a positive blood culture?

A· How many parents refused consent for inclusion in the study?

A· Page 7 line 17: analysis should be analysis

A· Page 7 line 19 Why were these particular perinatal risk factors chosen? (presumably as there is an increased risk of infection). Why were other risk factors e.g. maternal pyrexia, maternal UTI, foul smelling baby not included?

A· Page 9 line 12. Need to explain why group 2C was excluded from the ROC analysis?

A· Throughout the paper, there should be a single space before the square bracket enclosing a reference number.

In terms of the remaining questions regarding the paper:

The discussion and conclusion are sound and supported by the data. Limitations of the study are addressed. The manuscript adheres to required standards. The title and abstract adequately convey the message and the writing is acceptable. The standard of English is acceptable.

I feel that the article is of importance in the field and would recommend publication once the concerns regarding the subjects and methods have been clarified.

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

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Discretionary Revisions (which the author can choose to ignore)