PEER REVIEW

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Submitted 03.05.2020

The authors have raised a very important issue on the potential risk of vertical transmission. As they have rightly pointed out, the jury is out at present given the paucity of evidence.

One of the reasons for possible confusion is the lack of universally accepted criteria for confirming a vertical transmission. It is not clear whether presence of virus in the amniotic fluid, cord blood, placenta, positive new-born RT-PCR or a positive IgM level in the foetal/neonatal blood would constitute a vertical transmission. It also remains to be answered whether vertical transmission, if any, would depend on the extent of maternal viral load.

One of the possible theories behind low risk for vertical transmission is the lack of angiotensin-converting enzyme 2 receptor expression in different cell types of early maternal-foetal interface. As SARS-CoV-2 is thought to use these receptors for their entry, their deficiency could partially explain why the risk of intrauterine mother-to-child transmission for SARS-CoV-2 is low (Zheng et al. Single-cell RNA expression profiling of ACE2 and AXL in the human maternal–foetal interface Year 2020 Volume 4).

Some coronavirus, such as 229E, OC43, NL63, and HKU1 are proven to have the potential of vertical transmission (Gagneur et al Materno-fetal transmission of human coronaviruses: a prospective pilot study. Eur J Clin Microbiol Infect Dis. 2008). However, the same has not been established convincingly for SARS-CoV and MERS-CoV. It is true that maternal infections with these two viruses have not been associated with increased risk miscarriage or second trimester loss but learning from our experience with Zika virus outbreak in 2016, which is again an RNA virus, we must remain extremely cautious about adverse foetal outcomes with SARS-CoV2 until proven otherwise.

The authors are absolutely right that further evidence from larger epidemiological studies are necessary to clarify the issue.

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Well written article highly relevant in the current pandemic. Apologies - I will not manage to confirm the accuracy of references- hopefully they are right.

Key word— may be better to use "Vertical" rather than "Direct" transmission

COVID19 or COVID-19- please maintain consistency throughout the article. (See COVID19 in key words)

Introduction: would be it possible point out that SARS COV 2- is the virus leading to COVID 19. Some people still don't know this fact. It may be useful to clarify this bit.

The paragraph starting with - "understanding the impact..... guidelines for Obstetric .... not only obstetric, development of Neonatal guidance is equally important.

In this article on COVID 19 and vertical transmission: what is the significance of severe maternal disease on fetus. Would severe infection increase the probability of vertical transmission? Or the baby suffers adversely from the profound hypoxia/metabolic changes from respiratory failure/ organ failure and being in intensive care for long time. How would Cytokines storm affect the baby?

" which may be be unavoidable limitation given the recent emergence..." - it takes a bit of effort to correlate this sentence with the context. May be make it a bit simpler if possible!!

Diagnostic test in the neonate - which one? Swab or antibody test. They have high false negative rates - particularly swabs. Antibody test- for foetal infections around perpartum period - more likely to be false positive (if IgG) and false negative (if IgM). Therefore diagnostic criteria for foetal or neonatal infection need to be standardised.

Please check the reference to Rubella rate of transmission being 50% transmission etc.... The standards figures relate to rate of foetal anomaly/teratogenicity rather than the actual rate of vertical transmission in different trimesters. Vertical transmission rates may not be different in different trimester- it's the effect on baby that are very different in different trimesters. All relates to the formative stage of the foetus.

Please remove the extra hyphens : ....the third neonate required treatment for non-COVID-19- ......

Not sure about relevance of "effect on infection on children" when you are writing about vertical transmission and effects of foetus/neonate.

Would be good to explain if there are any theories theories behind the reduced vertical transmission and what happens if the virus get transmitted vertically.

Recent RCOG guidance - . Vertical transmission -possible.

Why do we need to Study vertical transmission? Any teratogenicity? - Can baby get congenital pneumonia?? ? Difficult to prove at present. Zika led to microcephaly. Some viruses have adverse effect of on foetal development - be it structural effects or functional. - that is more important than actual presence of virus in the amniotic fluid on the foetus . Rate of transmission and effect - in different trimesters??

What may be possible effects on baby. Miscarriage, teratogenicity? What about risk of still birth?

Hopefully -, as highlighted by the authors- clearer information will emerge in the near future.

What is the significance of the statement on "miscarriage in SARS and MSERS to COVID 19? How do they relate to COVID 19.?

Correct the Ref 3: New England Journal of Medicine to the abbreviated form.

RCOG recent update in May 2020 - highlights possibility vertical transmission. Consider highlighting the month of publication of RCOG guidance- it gets updates regularly.

Please check the way you have cited references - consider usual BMJ style? (Usually- authors. Title. Journal 2020;80:130-135.) not sure what BAPIO journal format is?

Ref 15: please check the Journal cited as : The Lancet Respiratory Medicine - it may be abbreviated as .... Resp Med. I am not sure - please check.