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1018 - Vertical transmission and Covid-19: a Systematic Review

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Background: Since March 2020 the world is living the pandemic of COVID-19. At first, there were no evidence of a worse prognosis for pregnant women, but quickly, pregnant women and neonates were recognized as a most vulnerable group for disease complications. However, after 2 years of intense research on the disease, the knowledge about vertical transmission of COVID-19 has many gaps. Gathering the available information on SARS-CoV-2 vertical transmission may help clinicians in counseling women, either pregnant or those considering pregnancy. **Objectives:** To assess the current evidence of vertical transmission of SARS-CoV-2. **Methods:** In this systematic review, we included observational studies that answered the question: "Is there vertical transmission of Covid-19?". A set of keywords was elaborated based on the PECO strategy and we performed a literature search using MEDLINE/PubMed, Embase and Lilacs. The articles were analyzed by title, abstract and then, the full article. Studies published in English, Portuguese and Spanish between January 2020 and January 2022 were included. We excluded unpublished materials, abstracts and case reports. Risk of bias was assessed regarding limitations of observational studies. **Results:** Among 657 studies initially ed, 32 met the eligibility criteria and composed this review. Among the 19.418 participants assessed (range 9 - 8010), 9.704 were newborns and 9.714 were pregnant women. Most studies could not show evidence of vertical transmission, although the diagnostic methods employed differ amidst the studies. A great comprehensive study investigated over 4000 confirmed or highly suspected infected pregnant women and estimated the mother-to-child transmission risk to lie between 0.9 and 1.8%. However, this finding was not robust enough due to the impossibility of running out horizontal transmissions. **Conclusions:** Considering the limitations present in our review, the available evidence shows that the occurrence of vertical transmission of Covid-19 is uncommon and difficult to prove, since there are several confounding factors and biases in excluding horizontal transmission. In summary, studies show that the benefits of breastfeeding and rooming-in outweigh the risk of mother-to-infant transmission. Therefore, more studies are needed to explore the characteristics and particularities of vertical transmission in the context of Covid-19.