Trabalhos Científicos

Título: The Impact Of Maternal Respiratory Syncytial Virus Vaccination On Newborn Health: A Systematic Review And Meta-Analysis

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Resumo: Respiratory Syncytial Virus (RSV) affects neonates across the globe, particularly through lower respiratory tract infections (LRTIs). Maternal vaccination is a potential tool to reduce these impacts. Yet, it is mandatory to evaluate the safety before its extensive implementation. "To compare preterm birth rates in infants born to mothers who received the RSV vaccines, RSVpreF and RSV F protein nanoparticle, or a placebo during pregnancy, and to evaluate its effect on the occurrence of medically attended and severe RSV-associated LRTI, as well as related hospitalizations up to 180 days after birth. "PubMed, EMBASE, and Cochrane databases were systematically searched for randomized controlled trials (RCTs) evaluating the impact of maternal RSV vaccination in healthy pregnant women on the rate of preterm birth in newborns and occurrence of medically attended RSV-associated LRTIs. Statistical analysis was conducted using Review Manager version 5.4, and heterogeneity was assessed using Cochrane´s Q test and I^2 statistics."We analyzed data from 18011 pregnant women and 17769 neonates across 6 studies. The analysis of preterm birth risk associated with the RSV vaccines compared to placebo revealed no statistically significant difference (RR 1.17, 95% CI; [0.99 to 1.37]; $p < 0.07$). However, in a subanalysis restricted to studies administering RSVpreF, the analysis indicates a higher risk of preterm birth in the RSV vaccine group compared to placebo (RR 1.27, 95% CI; [1.09 to 1.47]; $p = 0.002$). There was a significant reduction in medically attended RSV-associated LRTIs (RR 0.48, 95% CI [0.30–0.78]; $p < 0.003$), severe RSV LRTIs (RR 0.35, 95% CI [0.21–0.61]; $p < 0.0002$), and related hospitalizations up to 180 days (RR 0.53, 95% CI [0.41–0.69]; $p < 0.00001$) in the vaccines group compared to placebo."This meta-analysis indicates a meaningful reduction in medically attended RSV-associated LRTIs, severe RSV LRTIs, and related hospitalizations in the RSV vaccine group.The difference in preterm birth rates revealed no statistically significant difference when both vaccines are analysed, however in a RSVpreF subanalysis there is a higher risk of preterm birth in the vaccine group. Therefore, more studies are essential to deepen our understanding of this topic.