

Maternal SARS-Cov-2 Infection and Associated Neonatal Sepsis: A Retrospective Multicenter Study in Jordan

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ABSTRACT

Background: Neonatal sepsis is a bloodstream infection that can lead to severe health complications in newborns, including permanent brain damage. The connection between maternal SARS-CoV-2 infection during pregnancy and neonatal sepsis is not yet completely understood.

Objective: To evaluate the frequency of neonatal sepsis in infants born to mothers who contracted SARS-CoV-2 during pregnancy.

Design: Retrospective multicenter observational case-control study.

Setting: Five hospitals in Jordan.

Method: A total of 184 participants were enrolled, with 93 COVID-19 positive mothers and 91 non-COVID-19 mothers serving as the control group. Maternal and neonatal data were obtained using a structured questionnaire in the National Electronic Health Database.

Results: The patient group had a higher frequency of COVID-19 infections prior to pregnancy than the control group (33.3% vs. 21%). Among COVID-19 positive mothers, 94.6% were infected once during pregnancy, with 52.7% experiencing moderate severity. Birth weight did not significantly differ between groups, except for extremely low birth weight (2.2% in patients vs. 1.1% in controls). Neonatal sepsis was detected in 5.4% of infants born to COVID-19 positive mothers but was absent in the control group. NICU admission was higher in the patient group (37.6%) than in the control group (31.9%). Significant associations were found between sepsis, COVID-19 severity, and NICU admission.

Conclusion: Maternal COVID-19 infection during pregnancy is linked to a higher risk of neonatal sepsis and NICU admission. These findings highlight the importance of careful monitoring and management of COVID-19 in pregnant women to mitigate potential adverse neonatal outcomes.

Keywords: Neonatal sepsis, maternal SARS-CoV-2 infection, pregnancy, NICU admission.

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