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Title: Risk Factors associated with Severe-Critical COVID-19 during pregnancy

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Abstract

Background

Risk factors associated with severe-critical COVID-19 are based on findings in the general population. Pregnant women are at increased risk to severe-critical COVID-19, few reports are based on these women.

Aim of the Study

The aim of the study is to report risk factors associated with severe-critical COVID-19 during pregnancy.

Methods

A multicentric case control study was conducted at Mexican Institute of Social Security, State of Mexico during COVID-19 pandemic. We included pregnant women who were consecutively admitted to respiratory care units and were followed until 30 days after resolution of pregnancy. A total of 758 pregnant women with a positive RT-PCR test for COVID-19 were enrolled from 1 June 2020 to July 2021. We defined groups using the World Health Organization Severity Classification, cases were pregnant women with severe-critical COVID-19 (n=123) and controls were subjects with non-severe COVID-19 (n=635). Data was gathered from clinical files. A multivariate logistic regression analysis was used to adjust odds ratios and their 95% confidence intervals of factors associated with severe-critical COVID-19.

Results

Risk factors associated with severe-critical COVID-19 in pregnancy were non-vaccination (OR 10.18), mother's blood group non-O (OR 6.29), maternal age >35 years (OR 5.76), history of chronic hypertension (OR 5.12), gestational age at infection ≥ 31 weeks (OR 3.28), and multiparity (OR 2.80).

Conclusions

Our results show that the non-O blood type and non-vaccination are the most important independent risk factors associated with developing of severe-critical COVID-19 during pregnancy.



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Biography (upto 150 words)

María Guadalupe Berumen-Lechuga is a Medical Doctor with specialty in Gynecology and Obstetrics has completed PhD studies at Universidad Nacional Autónoma de México (UNAM) in México City. He is Medical Researcher and Coordinator of Medical Research at Mexican Institute of Social Security (IMSS), Professor at Universidad Nacional Autónoma de México and Universidad Autónoma del Estado de México. He has 13 publications that have been cited over 150 times, and his publication H-index is 5. He is currently conducting medical research on high-risk pregnancies, chronic kidney disease, preeclampsia, high-risk biomarkers, angiogenic factors, inflammation, and COVID-19.

Recent publication:

1. Berumen-Lechuga MG, Molina-Pérez CJ, García-Cortés LR, Muñoz-Medina JE, Rosas-Peralta M, Dichi-Romero MLÁ, Julián-Hernández YJ, Vázquez-Rasposo AS, Palomo-Piñón S. Caracterización epidemiológica de la COVID-2019 en población obstétrica mexicana: estudio de cohorte [Epidemiological characterization of COVID-2019 in Mexican pregnant women: a cohort study]. *Rev Med Inst Mex Seguro Soc.* 2023 May 2;61(3):314-320. Spanish. PMID: 37216499.
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