

SELECTED ORAL COMMUNICATIONS**SESSION 69: EARLY PREGNANCY - EVIDENCE AND IMPLEMENTATION INTO PRACTICE**

01 July 2021

Stream 4

08:30 - 09:30

O-197 Maternal and neonatal characteristics and outcomes of COVID-19 from early pregnancy until labor: an overview of systematic reviews**H. Siristatidis¹, M. Papapanou¹, M. Papaioannou¹, A. Petta¹, E. Routsis¹, M. Farmaki¹, V. Nikolaos¹**¹National and Kapodistrian University of Athens, Second Department of Obstetrics and Gynecology- "Aretaieion Hospital", Athens, Greece**Study question:** What is the current obstetric-perinatal and neonatal outcome of infected pregnant women and their newborns during the COVID-19 pandemic?**Summary answer:** Miscarriage rates were <2.5%, even when only studies of moderate/high-quality were included. Increased rates of CS and preterm birth were found, with uncertain vertical transmission.**What is known already:** A considerable number of systematic reviews, with substantial heterogeneity regarding their methods and included populations, on the impact of COVID-19 on infected pregnant women and their neonates, has emerged.**Study design, size, duration:** Three bibliographical databases were searched (last search: September 10, 2020). Quality assessment was performed using the AMSTAR-2 tool. Primary outcomes included mode of delivery, preterm delivery/labor, premature rupture of membranes (PROM/pPROM) and abortions/miscarriages. Outcomes were mainly presented as ranges. A separate analysis, including only moderate and high-quality systematic reviews, was also conducted. The protocol was registered with PROSPERO (CRD42020214447);**Participants/materials, setting, methods:** The search strategy followed the Preferred Reporting Items for Systematic Review and Meta-analysis (PRISMA) guideline. Keywords employed were (COVID-19 OR SARS-CoV-2 OR "Coronavirus disease 2019") AND ("Neonatal outcom*" OR "Neonatal

characteristic*” OR “Maternal outcom*” OR “maternal characteristic*” OR “pregnancy outcom*” OR “vertical transmission”). All retrieved studies were imported into the Rayyan QCRI and duplicated articles were removed. A snowball procedure was also implemented by hand-searching the reference lists of included systematic reviews for additional sources.

Main results and the role of chance: Thirty-nine reviews were analyzed. Twelve reviews (30.8%) were found to be of “very low quality”, 11 of “low quality”, 13 (33.3%) of “moderate”, and three (7.7%) of “high quality”.

Ten articles dealt with miscarriages. One review integrated them into pregnancy terminations (1.4% (4/295)), one into intrauterine fetal deaths (1 (3%)), while another one described them as “spontaneous abortions” (0.8% (3/385)). Taking into account reviews, which calculated these rates for their entire included population, miscarriage rates were <2.5%. The reported rates by moderate and high-quality studies were $\leq 2\%$. Reported rates, regarding both preterm and term gestations, varied between 52.3%-95.8% for caesarean sections; 4.2%-44.7% for vaginal deliveries; 14.3%-63.8% specifically for preterm deliveries and 22.7%-32.2% for preterm labor; 5.3%-12.7% for PROM and 6.4%-16.1% for pPROM. Maternal anxiety for potential fetal infection contributed to abortion decisions, while SARS-CoV-2-related miscarriages could not be excluded. Maternal ICU admission and mechanical ventilation rates were 3%-28.5% and 1.4%-12%, respectively. Maternal mortality rate was <2%, while stillbirth, neonatal ICU admission and mortality rates were <2.5%, 3.1%-76.9% and <3%, respectively. Neonatal PCR positivity rates ranged between 1.6% and 10%. After accounting for quality of studies, ranges of our primary outcomes remained unchanged.

Limitations, reasons for caution: Results are presented in a narrative way using ranges as the primary mean of quantification. We also included studies with both RT-PCR positive women and women with suspected infection based on their clinical and imaging manifestations, whereas, if excluding them, we might have missed a considerable source of information.

Wider implications of the findings: In conclusion, a rapid increase of CS was observed, especially at the beginning of the pandemic, most likely due to lack of knowledge and robust recommendations. Preterm birth rates were elevated, with iatrogenic reasons potentially involved. Even though neonatal infections were rare, the probability of vertical transmission cannot be eliminated.

Trial registration number: not applicable