



Feto maternal outcome in pregnancy with covid 19 infection.

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ABSTRACT

Objective

Despite rapidly raising number of cases of coronavirus disease, there are limited data about clinical characteristics and feto maternal outcome in pregnant women with disease. (1,2) This study is aimed to conduct a systematic review of the clinical features and feto maternal outcome with coronavirus disease in pregnant females.

Study Eligibility Criteria

All pregnant women who were diagnosed as COVID positive by acid nucleic test from march 2020 to june 2020 and from july 2020 to september 2020 diagnosis done by rapid antigen test and RT PCR done only if symptomatic antigen negative patient as per decided by authority of our institute were included in study.

Results

Study involved 35 pregnant women, who were eligible for the systematic review. At the time of the report, 4 pregnancies were ongoing; of the remaining 31 pregnant women, 1 patient found positive in first trimester pregnancy who is presented with complain of bleeding per vaginum, usg report suggestive of missed abortion, medical management was done. 21 gave birth by cesarean delivery, and 9 gave birth vaginally; in this study 4 neonatal death were reported.

Conclusion

Although vertical transmission of severe acute respiratory syndrome coronavirus 2 infection has been excluded thus far and the outcome for mothers and neonates has been generally good, the high rate of preterm delivery by cesarean delivery is a reason for concern(3,4). Cesarean delivery was typically an emergency surgical intervention, and it is mostly associated with oligohydramnios.(5) Coronavirus disease associated with respiratory insufficiency in late pregnancies certainly creates a complex clinical scenario.

Key words

caesarean delivery

coronavirus pneumonia

COVID-19

fetal death

neonatal outcomes

preterm birth

SARS-CoV-2

stillbirth

vertical transmission novel coronavirus

viral pneumonia

Introduction

Key findings

The median gestational age was 37 weeks (interquartile range, 35–38), with 10 cases of preterm birth ; caesarean delivery was reported in 70% of the cases. Indication were mostly associate with oligohydramnios & AFI diagnosed on usg and colour doppler by radiologist of our institute.

Objective

The aim of this study was to collect and review the available information about the impact of COVID-19 on pregnancy and feto maternal outcome.

Results

Study includes data of covid 19 positive patients from March 2020 to September 2020. During this period total 6150 deliveries occurred in our institute. All those pregnant female were undergone testing of corona virus by RT-PCR or rapid antigen test, among them we found total 30 cases of pregnancy with covid 19 positive status, out of these 9 patients delivered vaginally and 21 patients delivered by caesarean section, remaining 5 patients were diagnosed during routine antenatal check-up out of which 1 patient had missed abortion which was managed medically and remaining 4 antenatal patients recovered completely and having no any complication and they all are in follow up. Rate of delivery in covid positive patients among all deliveries during study period was 0.4%. In all patients diagnosis of COVID-19 was confirmed either by quantitative reverse transcriptase polymerase chain reaction (RT-PCR) on samples from the respiratory tract or rapid antigen test. (6) Among all, 30 patients were diagnosed by RT PCR from march 2020 to June 2020 and 5 patients were diagnosed by rapid antigen test and 1 patient found rapid antigen negative but symptomatic positive, RT PCR done in that patient and found positive from July 2020 to September 2020.

According to ICMR guidelines “Pregnant women residing in cluster\containment area or in large migration gathering\evacuees centre from hotspot districts presenting in labor or likely to deliver in next five days should be tested even if asymptomatic,” (7)

Median maternal age was 28 years. Median gestational age was 37 weeks and 10 patients delivered before 37 weeks' gestation. In 22 cases, the interval between symptoms onset and delivery ranged between 1 and 7 days. In 3 cases, COVID-19 symptoms appeared after delivery.

Twenty pregnant women (57.1%) presented with fever at hospital admission.

Fifteen women (42.8%) presented with dry cough (considered alone or in association with other symptoms).

Ten women (28.5%) had sore throat and 10 women (28.5%) had myalgia.

Eight patients (22.8%) had fever only in the postpartum period.

Table 3. Reported symptoms at diagnosis

Onset symptoms	Reported for 35 pregnant women often in combination (%)
Fever admission	20/35 (57.1)
Dry cough	15/35 (42.8)
Sore throat	10/35 (28.5)
Myalgias	10/35 (28.5)
Post partum fever	8/35 (22.8)
Diarrhea	5/35 (14.2)
Dyspnea	4/35 (11.4)

Less frequent symptoms included Diarrhoea in 5 cases(14.2%) and Dyspnoea in 4 cases (11.4%).

We found 1 case of coronavirus infection during the first trimester of pregnancy, 2 cases of infection in the second trimester, and 32 cases of infection in the third trimester.

Total delivery of covid positive patients -30
 Total patients delivered by vaginally -9
 Total patients delivered by caserean section- 21
 Indication of LSCS
 1)oligohydroamnios -9/30(30%)
 2)meconium stained liquor -7/30(23%)(among them 3 were associated with oligohydroamnios)
 3)Previous lscs with scar tenderness -3/30(10%)
 4)non progression of labor-2/30(6%)

The 29 neonates were in good condition at the time of birth. However, not all reviewed studies reported a 5-minute Apgar score. In all cases, neonatal throat swab samples were collected within 72 hours after birth and tested negative. One neonate was delivered by caesarean delivery at gestational age of 34 weeks and 5 days; birth weight was adequate for gestational age; was admitted to the neonatal intensive care unit (NICU) 30 minutes after delivery because of shortness of breath and grunting; developed thrombocytopenia, liver dysfunction, and multiple organ failure; and died 9 days after delivery. Although a throat swab in this neonate was negative for COVID-19, a perinatal infection cannot be excluded.

Comments

Principal finding

Thus far, pregnant patients with COVID-19 have almost delivered by caesarean delivery and frequently before term gestation.(3) This is a reason for concern because the COVID-19 pandemic is spreading around the world, and most likely, many pregnant women will be affected. As a matter of fact, in our analysis of the available literature, the clinical outcome has been generally favourable for both mothers and neonates, although a word of caution is necessary. Of the 35 cases we analysed, at least 1 mother was severely compromised, and in general follow-up, data were scanty. We confirm that there was no evidence of vertical transmission Out of 29 neonates that were delivered, there was 1 stillbirth in a severely compromised mother, At present, the available evidence does not provide insight as to whether these patients require or do not require a different approach from a standard one. It would be important that in the near future, studies around the implications of COVID-19 in pregnancy contain thorough information about both the maternal and fetal conditions at the time of delivery and the rationale behind obstetrical interventions

Conclusion

In the context of the covid-19 pandemic, ongoing collection of data on the outcomes of infection during pregnancy will remain important. The available data on pregnant patients with COVID-19 do not provide a clear conclusion into the clinical implications for the mother and neonate. The outcome thus far described is favourable, but fetal and maternal risks should not be underestimated. Although preterm delivery was mostly the consequence of emergency interventions, a trend toward spontaneous prematurity is present. It is essential that future studies provide more detailed information on maternal and fetal conditions, as well as the rationale for obstetrical interventions. Experience, thus far, is limited to patients who developed the disease in late gestation and patients who delivered shortly after the diagnosis. The fetal consequences of long-standing infections occurring in early gestation are unknown.

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