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Obstetrics and Perinatal Outcome in Asymptomatic Covid-19 Positive Pregnant Women in Labour

Case Report

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Abstract

Aims: The aim of this series of case study is to evaluate the obstetric and perinatal outcome in asymptomatic positive pregnant women presenting with labour symptoms.

Material and method: It is aa prospective observational study of case study of COVID-19 positive 11 pregnant women out of 479 asymptomatic cases presented with labour in our obstetric unit in a time period of 6 months from April 2020 to September 2020.

Results: The findings of this series of case study supports the importance of universal testing for COVID-19 in all pregnant females admission with a potential value to facilitate the early initiation of infection control precautions along with well prepared infrastructure of public health facility to address unique needs of pregnant females with COVID-19 positive status especially when presenting for delivery.

Keywords: COVID-19; Pregnant; SARS-CoV-2

Introduction

COVID status of pregnant women has huge implications for the mother and the neonate besides a risk for spread to the health care providers. Current Coronavirus disease 2019 (COVID-19) pneumonia pandemic caused by the Severe Acute Respiratory Syndrome Coronavirus - 2 (SARS-CoV-2) has become a major global threat [1,2]. Since its 1st identification in Wuhan, China in December 2019, COVID-19 has spread globally at an accelerated rate with rapid increase in cases and mortality [1,3].

It is thus reasonable to expect a significant number of potentially (asymptomatic) COVID-19 positive pregnant females to the obstetrics units in current trajectories for exponential disease growth. Even ACOG recognises this potential and implores clinicians to consider additional strategies [4].

Physiological changes in pregnancy such as reduced functional residual volume, diaphragm elevation, oedema of respiratory tract mucosa as well as changes in cell immunity increase the susceptibility to viral infections with worsened outcome [5,6].

Most pregnant women present mild illness with fever, cough, fatigue, shortness of breath however some may be asymptomatic [7-9]. However in the presence of comorbidities and obstetric risk factors such as increasing age, high body mass index, chronic high blood pressure, preexisting diabetes, preeclampsia and gestational diabetes severity of the pathology may worsen [9,10]. COVID-19 exaggerates the hypercoagulable state of pregnancy [11]. Hence, when compared to non-pregnant females in the same age group they have higher risk of admission in ICU with invasive ventilation.

Materials and Methods

We present a series of 11 patients admitted with labour without any symptoms of COVID-19. They turned out to be positive on RT-PCR testing for COVID-19 out of 479 pregnant females presenting with labour in a period of 6 month from April 2020 to September 2020 in the obstetric unit of our institute - AIMS Faridabad. As per our institutional policy all pregnant females presenting to obstetric units irrespective of medical or obstetric indication undergo COVID-19 RT-PCR evaluation especially with high prevalence of COVID-19 in our area. By the time the report was available positive asymptomatic females had already delivered.

Observation

Total COVID Positive Asymptomic Cases	n = 11

Out of 479 asymptomatic females delivering from april 2020 to sept 2020 in our institute, 11 females came out to be RT PCR for covid positive.

Age	<35 years	>35 years
	8	3

8 patients out of these 11 females were less than 35 years of age.

Parity	PRIMI	G_2	G_3	G_4
	6	3	1	1

GA at Delivery	>37 weeks	Upto 34 weeks
	10	1

Only 1 patient out of these 11 females delivered at 34 weeks gestation (preterm delivery due to APH).

Mode of Delivery	Vaginal	LSCS
	5	6

Out of the 11 cases, 5 were delivered vaginally and 6 had to undergo LSCS.

Indiaction of LSCS				
NPOL	BREECH	TWINS	FETAL DISTRESS	APH
2	1	1	1	1

NICU Stay	2

2 newborns had NICU admission. 1 in view of prematurity and other in view of congenital pneumonia presentation.

Congenital Pneumonia in New Born	1

One Neonate was diagnosed with congenital pneumonia although its association with COVID positive status of mother could not be established. Baby was found COVID Negative by RT PCR.

Covid Status of New Born	1 Positive

Only 1 newborn was found to be RT PCR positive although asymptomatic and remained with mother.

Discussion

The data pertaining to the COVID-19 pandemic has been rapidly evolving since the first confirmed case in December 2019. Our case study is an attempt to evaluate the effect of COVID-19 in asymptomatic pregnant women presenting in labour with respect to their obstetric and perinatal outcome.

A study conducted by Indian Council of Medical Research - National Institute for Research In Reproductive Health (ICMR-NIRRH) together with the Medical Education and Drug Department (MDD) and BLY Nair Hospital noted that most COVID-19 positive pregnant females are asymptomatic. In our study all COVID-19 positive pregnant females were asymptomatic.

Even BMJ reported in pregnant and recently pregnant females with COVID-19 had lesser odds of exhibiting COVID-19 related symptoms of fever and myalgia when compared to non-pregnant females. However, they have a higher risk of admission to ICU with invasive ventilation in comparison with non-pregnant females of the same age group [5,6]. Hence, treating clinician should be cognizant of this high risk group with preparedness and response plans for life saving intervention in the context of worsening pathology.

Preterm birth rate appears to be higher in pregnant females with COVID positive status with high likelihood of NICU admission [9,11]. However this was not observed in our series. Studies have found an estimated incidence of positive infant SARS-CoV-2 test as low as 1.1% in among infants born to positively testing mothers [12]. No infant required re-hospitalization in the follow-up period. Vertical transfer of COVID to the fetus has been reported in world literature [10,11]. Though one child in our study was found to be positive amongst these 11 cases, the diagnosis was known after delivery and testing of placenta for COVID could not be done to confirm vertical transmission.

Early findings from a study PRIORITY (Pregnancy Coronavirus Outcomes registry) published in clinical infectious disease, adverse outcomes including preterm birth, NICU admission, respiratory diseases didn't differ those born to mothers testing positive to SARS-CoV-2 and born to mothers testing negative. The study also suggested that infants born to mothers with SARS-CoV-2 generally do well in the first 6-8 weeks after birth [13].

Result

This paper hence is an attempt to emphasize the following recommendations-

1) Some clinical manifestations of COVID-19 overlap with symptoms of normal pregnancy (nausea, vomiting, fatigue, nasal congestion, shortness of breath), hence should be considered while evaluating afebrile pregnant women.

2) Pregnant females should follow the same protocol as non-pregnant to avoid exposure to viruses.

3) Use of adequate precautions and personal protective equipment should be the norm irrespective of the patient being asymptomatic till the COVID status is known.

4) Separation to reduce mother to newborn transmission is not required if neonate tests positive for SARS-CoV-2.

5) If another healthy family member is providing infant care use of appropriate personal protective equipment should be emphasized.

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