



OBSTETRICS AND FETAL OUTCOME OF PREGNANT WOMEN WHO IS INFECTED IN 1ST AND 2ND TRIMESTER OF PREGNANCY- PROSPECTIVE OBSERVATIONAL STUDY

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ABSTRACT

BACKGROUND: In December 2019 a novel strain of coronavirus, was first isolated by the Chinese Centre for Disease Control and Prevention. This strain connected to the cluster of acute respiratory illness cases from Wuhan, China was later officially named as severe acute respiratory syndrome coronavirus 2 (SARS-Cov-2). On 30th January 2020, WHO declared the outbreak of SARS-Cov-2 a public health emergency of international concern, and on 11th March 2020 declared it to be a pandemic. Pregnant women are known to be at higher risk of severe morbidity and mortality from respiratory infections such as influenza and SARS, making a strong case for pregnant women to be considered an at-risk population for COVID-19. The risks of adverse maternal and perinatal outcomes are not very clear in coronavirus disease 2019 (COVID-19)-positive pregnant women (who is infected in 1st and 2nd trimester of pregnancy). Therefore, this study aimed to determine the maternal and fetal outcome in COVID 19 positive pregnancies.(infected in <26 weeks of pregnancies)

METHODS: This is Prospective observational study of 50 cases based on compiled clinical data for pregnant women with COVID 19 infection between April 2020 – September 2020(6 months) . a laboratory confirmed positive cases of COVID 19 infection in pregnant women were included. we included all pregnant women coming to new civil hospital Surat who had COVID-19 in 1st and 2nd trimester pregnancies and then follow up of obstetrics and fetal outcome taken via telephonic contact.

RESULTS: In our study, majority of subjects had full term vaginal delivery (38%)and followed by 22% subjects had full term LSCS . total 26% were abortions. In neonatal outcome ,Majority had live birth which was 66% , majority had birthweight between 2.6 – 3.5 kg. 18% babies had NICU admission out of which 8% due to prematurity.14% babies discharged successfully.

CONCLUSION: In our study most of subjects who had covid 19 infection in 1st and 2nd trimester of pregnancy had full term vaginal delivery. Majority of babies were covid negative and had birth weight within normal range.COVID-19 pandemic affects the pregnant women along with the general population. As the pandemic waves continues to recur with newer strains, the obstetricians have to be vigilant. The pregnant women with severe disease have to be given intensive multidisciplinary care to prevent maternal and fetal morbidity and mortality.

KEYWORDS : Covid 19 Infection in <26 Weeks, Obstetric Outcome, Neonatal Outcome, Birth Weight

INTRODUCTION

Coronavirus disease 2019 (COVID-2019) pandemic severely affected the health, economy and life style of people all over the world.1 Following the first case report in Wuhan, there was a rapid increase in the cases all over the world. All age group were affected and had become international public health emergency.2 Pregnant women are more prone for COVID-2019 infection due the physiological changes like decreased functional residual capacity and changes in cellular immunity which can lead to higher maternal and fetal mortality and morbidity.3 There are vulnerable groups within both the pregnant and nonpregnant populations. Clinicians should be aware of these high-risk groups and manage them accordingly.4 While certain affected individuals remain asymptomatic, others experience some form of disease related manifestations like fever, myalgia, anosmia, respiratory symptoms like sore throat, dry cough and breathlessness.5

Since pregnancy is known to be a period of increased risk for the susceptibility of respiratory infections, such as influenza, it appears important to screen for COVID-2019 in the presence of symptoms and monitoring is needed.6

Until now, the effects of COVID-19 on pregnancy, such as preterm labour, intrauterine transmission, and intrauterine growth restriction were limited. The risks to the mother appear to increase during the last trimester of pregnancy in other types of coronavirus infection (SARS, MERS). There have been case reports of preterm birth in women who have COVID-19,

but it is unclear whether the preterm birth was always iatrogenic or spontaneous.

Aims and Objective

To study obstetrics and neonatal outcome in subjects who had covid 19 infection in 1st and 2nd trimester if pregnancy(<26 weeks).

MATIREAL AND METHODOLOGY

This prospective observational study was carried out in the obstetrics and gynaecology department in the new civil hospital, Surat from April 2020 to September 2020(6 months) after ethical committee approval. Subjects were followed up till discharge and till delivery by telephonic talk.

Inclusion Criteria: All the patients who were laboratory-confirmed cases of COVID-19 infection in 1st and 2nd trimesters of pregnancy (< 26 weeks)admitted to a new civil hospital were included in this study

Exclusion Criteria: This study does not include postnatal women, > 26 weeks of pregnant women and nonpregnant women

RESULTS AND OBSERVATIONS:

Table 1 : Obstetric Outcome

Obstetric outcome	No of Subject (n=50)	Percentage (%)
Spontaneous abortion	6	12
Induced abortion	7	14

Preterm vaginal delivery	6	12
Full term vaginal delivery	19	38
Preterm LSCS	1	2
Full term LSCS	11	22
Hysterotomy	0	0

In our study total 13 abortions were occurred from which 12% was spontaneous abortion out of which 8% were missed abortion, and 14% were induced abortion. out of 26% abortion 22% required dilation and evacuation. out of 50 subjects who had covid 19 in <26 week of pregnancy 12% had preterm vaginal delivery, 38% undergone full term vaginal delivery. 24% cases undergone lower segment caesarean section (LSCS) out of which 2% preterm LSCS and 22% had full term LSCS.

Table 2: Neonatal Outcome

Neonatal outcome		
Fetal outcome	No of Subject (n=50)	Percentage (%)
Live	33	66
Stillbirth	4	8
Abortion	13	26
Baby weight		
Baby weight	No of Subject (n=50)	Percentage (%)
<1.5 kg	4	8
1.5-2.5 kg	7	14
2.6-3.5kg	23	46
>3.5 kg	3	6
NICU STAY		
NICU STAY	No of Subject (n=50)	Percentage (%)
YES	9	18
NO	24	48
Indication of NICU stay		
Indication of NICU stay	No of Subject (n=50)	Percentage (%)
COVID 19 positive baby	2	4
RDS	2	4
Prematurity	4	8
Anomalous baby	1	2
Breastfeeding done or not		
Breastfeeding	No of Subject (n=50)	Percentage (%)
Yes	24	48
No	9	18
Treatment outcome		
Treatment outcome	No of Subject (n=50)	Percentage (%)
Discharge	7	14
Death	2	4

Table 2 Shows neonatal outcome in cases who had COVID 19 infected subjects who were infected in 1st and 2nd trimester of pregnancy. 66% had live birth and 8% were SB delivery and 26% were abortion. Majority of subjects had baby weight between 2.6- 3.5kg followed by 14% had baby weight between 1.5 -2.5 kg, 8% had baby weight between <1.5 kg, 6% had baby weight between >3.5 kg. out of 33 live birth 9 babies had NICU admission and 24 babies were mother side. out of 9 babies 4 were due to prematurity, 2 were due to pneumonia due to COVID 19 positive babies, 2 were due to RDS (respiratory distress syndrome), 1 was due to anomaly. out of 9 babies, 7 babies were discharged successfully. 2 babies were died due to extreme prematurity and anomalous baby.

DISCUSSION

In labor, a multi-disciplinary team should be involved in managing the patient. Individualized assessment of the pregnant woman, by the obstetrician along with the multi-disciplinary team to decide whether emergency caesarean birth or induction of labor is indicated either to assist efforts in maternal resuscitation or fetal or obstetric indications should

be performed. It should include consideration for the maternal and fetal condition, the potential for improvement following elective birth and the gestation of the pregnancy. If maternal stabilization is required before intervention for birth, this is the priority, as is in other maternity emergencies.

We compare obstetric outcome of our study with shree et al study. In shree et al study rate of LSCS was 24% whereas in our study it was 24% (including both preterm LSCS and full term LSCS). In shree et al study total abortion rate was 2% whereas in our study it was 26%, in shree et al study vaginal delivery rate was 74% whereas in our study it was 50%.

We compare our data with shah PT et al study, there was 42% subjects undergone normal vaginal delivery and 52% subjects undergone LSCS. 75% subjects had livebirth whereas in our study it was 66%. In shah et al study 16% babies were infected with covid 19 whereas that rate in our study was 4%. Neonatal death rate and SB rate was 2% and 3% respectively. Whereas in our study it was 4% and 8% respectively.

CONCLUSION

COVID-19 pandemic affects the pregnant women along with the general population. As the pandemic waves continues to recur with newer strains, the obstetricians have to be vigilant. The pregnant women with severe disease have to be given intensive multidisciplinary care to prevent maternal and fetal morbidity and mortality. Until the pandemic is over the pregnant women have to be advised to wear masks and follow social distance. Neonates of COVID-19 infected women also mostly tested COVID-19 negative whether the baby was born vaginally or by caesarean section. As the disease is new and long-term follow-up is required to study any residual or delayed effects on the new-borns, it could not be ascertained whether COVID-19 causes any abnormality in the fetus. More studies are needed with larger sample sizes to find out the effect of COVID-19 infection in pregnancy and neonates. This knowledge can be helpful in antenatal counselling and deciding management protocols for safe and favourable maternal and neonatal outcomes.

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Ethical Approval: The study was approved by the Institutional Ethics Committee

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