IJBPAS, February, Special Issue, 2022, 11(2): 271-275
ISSN: 2277–4998

International Journal of Biology, Pharmacy and Allied Sciences (IJBPAS)
'A Bridge Between Laboratory and Reader'

www.ijbpas.com

EFFECT OF CORONAVIRUS DISEASE (COVID-19) ON MATERNAL, PERINATAL AND NEONATAL OUTCOME IN THE SECOND WAVE: A RETROSPECTIVE STUDY

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Received 15th July 2021; Revised 18th Aug. 2021; Accepted 29th Oct. 2021; Available online 15th Feb. 2022

https://doi.org/10.31032/IJBPAS/2022/11.2.1035

INTRODUCTION

Severe acute respiratory syndrome Corona virus 2 (SARS-CoV- 2) being the causative factor for Corona virus disease 2019 (COVID-19), which was first reported in Wuhan in late 2019, has spread globally. As of September 2021, the world has experienced a total of more than 23 Crore cases and 47 lakh deaths from Covid 19 disease. India reported more than 3 Crore cases and around 4.4 lakh deaths from Covid 19 disease. The pandemic is not yet over and all over the world healthcare facilities are struggling to handle the cases of Covid-19 disease. Women during pregnancy and at the time of delivery and puerperium are high-risk group for COVID-19 **[1]**. World Health Organization (WHO) quoted that pregnant women who are older, obese, and have pre-

existing co-morbities such as hypertension and diabetes seem to have an increased risk of developing severe COVID-19 **[2]**. There are no much details about the transmission of the virus through breast feeding, thus breast feeding should be promoted in cases **[3]**.

In India the second wave of COVID-19 has had severe consequences in the form of complicated cases, reduced supplies of necessary treatments, and increased deaths particularly in the younger aged population **[4]**.

Aim:

- To study maternal, perinatal and neonatal outcome in second wave of affection of Corona virus disease(COVID-19)

Objectives:

- To summarize the maternal outcome in second wave of corona virus disease.
- To study the mode of delivery and its relation with corona virus disease.
- To study the incidence of vertical transmission and neonatal outcome in cases of corona virus disease.

METHODOLOGY:

A Retrospective study which included 58 patients which were tested (RTPCR) POSITIVE for corona virus and were admitted during the period from December 2020 to may 2021 conducted in the department of Obstetrics and Gynecology in Krishna institute of medical sciences karad in the second wave of Corona virus disease (COVID -19). All term patients who were tested positive for corona virus using PCR testing were admitted to isolation wards and were included in the study group. The patients were further divided into those without symptoms or systemic involvement or with symptoms or systemic involvement.

The maternal outcomes in terms of development of events further complicating pregnancy were studied. Mode of delivery and complications in the ante partum, intrapartum and postpartum period were documented. Further the incidence of vertical transmission and neonatal outcome using APGAR score was assessed.

RESULTS AND OBSERVATION:

In the current study a total 58 patients were included which were admitted under the department of ObGy in Krishna hospital karad who were tested positive for corona virus. The patients were isolated in a dedicated covid ward. Of the total patients they were further categorized into two groups; GROUP A: without symptoms (42 patients) and GROUP B: with symptoms (16 patients).

Table no.1 Age wise distribution

Age group	No. of patients
<20years	2
21-25 years	31
26-30years	13
31-35years	8
36-40 years	4
>40years	0

Table no.2 parity wise distribution

parity	No. of patients
primigravida	26
multigravida	32

Table no.3 Distribution of High risk factors

Risk factors associated with pregnancy	No. of patients
No risk factors	24
Hypertensive disorder	14
GDM	6
Prev.LSCS	12
Heart disease	0
Placenta previa	1
IUGR, Oligohydramnios	8
Breech	3

Table no.4 Mode of delivery

Category	LSCS	NVD
GROUP A	22	20
GROUP B	8	8

Table no.5 Hospital stay wise distribution

Hospital stay	<10days	>10days
GROUP A	38	4
GROUP B	0	16

Table no.6 Maternal mortality

Maternal mortality	No. of patients
GROUP A	0
GROUP B	2

Table no.7 incidence of vertical transmission

Vertical transmission	No. of patients
GROUP A	0
GROUP B	2

Table no.8 Neonatal outcome

Neonatal outcome	GROUP A	GROUP B
APGAR after 1 min <7	7	8
APGAR after 5 min >7	35	8
APGAR after 1 min <7	1	2
APGAR after 5 min >7	41	14

In the current study of the total 58 patients included in the study, which were further categorized into two groups; GROUP A and GROUP B.

Group A had 42 patients and Group B had 16 patients, after a comparative study it was found that 22 patients out of 42 in group a underwent lscs for obstetrical indications

while 20 had normal vaginal delivery; while out of the total patients in group B 20 patients underwent lscs and 8 patients had normal vaginal delivery. In the hospital stay if compared the ones with systemic symptoms that is the patients in group B had a longer duration of hospital stay as compared to the group A patients.

In the current study out of the total patients admitted 2 patients succumbed which were from group B. No patients from group A had a hospital stay more than 20 days.

In the current study comparing the neonatal outcome there was an incidence of vertical transmission in 2 newborns. NICU stay and APGAR score did not have significant variability in relation to the disease affection.

DISCUSSION

In comparison to the affection in the first wave it was seen that the degree of affection of pregnant women with corona disease (Covid-19) was relatively more. Reference studies conducted worldwide indicated that maternal COVID-19 affects pregnancy outcomes, with increased incidences of iatrogenic preterm births and caesarean section births due to maternal or fetal compromise, or both. In the current study also the rate of cesarean section in comparison to the normal vaginal delivery was more **[5, 6]**. Disease severity in Spain in second wave of covid pandemic was less severe in comparison with the first one in relation to maternal, perinatal and neonatal outcome **[7]**.

SUMMARY AND CONCLUSION

It is clear that in the current study in comparison to the earlier studies that pregnant and peripartum women are experiencing more severe illness in the 2nd wave of the corona virus disease(COVID-19) pandemic than was observed in the 1st wave. However, the exact cause of this change is still unclear **[8]**. Further detailed studies are urgently required to define whether the emergence of emergence of new variants could be related to this trend and would cause any harms to the perinatal and neonatal outcome and whether public health policies should be modified to enhance protection of pregnant women.

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