International Journal of Reproduction, Contraception, Obstetrics and Gynecology
Subramaniyan SK et al. Int J Reprod Contracept Obstet Gynecol. 2022 Dec;11(12):3396-3398
www.ijrcog.org
pISSN 2320-1770 | eISSN 2320-1789

DOI: https://dx.doi.org/10.18203/2320-1770.ijrcog20223139

Case Series

Pregnant women with COVID-19: a study in tertiary care centre

Sindu K. Subramaniyan*, Malathi Thagaraj

Department of Obstetrics and Gynecology, Kempegowda Institute of Medical Sciences, Bangalore, Karnataka, India

Received: 07 September 2022
Revised: 08 November 2022
Accepted: 09 November 2022

***Correspondence:**
Dr. Sindu K. Subramaniyan,
E-mail: cute16.sindu@gmail.com

ABSTRACT

COVID-19 had become a pandemic since December 2019. Although the infection rate affecting the pregnant women is less when compared to general population, the data on the effect of coronavirus in pregnancy are limited to a few case studies This was a case series conducted at KIMS Hospital, Bengaluru for a period of 1 year from November 2020 to November 2021. All the pregnant women irrespective of the gestational age admitted at KIMS hospital with COVID-19 reverse transcriptase polymerase chain reaction (RTPCR) positive and gave the consent were included in our study. In our study, out of 480 pregnant women 13 cases were COVID-19 positive. Out of the 13 positive patients, 4 delivered vaginally and 6 of them underwent lower segment caesarean section (LSCS) in view of obstetric indications. 3 cases (23%) were lost to follow up. 9 (90%) of neonates were negative for COVID 19. The results of our study concluded that COVID-19 positivity rate is 2.7% among the admitted patients. There is a risk of adverse pregnancy outcome in severe COVID-19 infections. The limitation of our study was that number of infected pregnant women was less to study the pregnancy outcome. Further studies with larger sample size will be required to study the pregnancy outcome.

Keywords: COVID-19, Pregnancy, Neonates, Infection

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.[7] In this study we estimate the COVID-19 positive rate in pregnant

women and study the pregnancy outcome in COVID-19 positive pregnant women.

CASE SERIES

In our case series in total of 480 pregnant women,13 cases were COVID-19 positive which belong to 2.71%. 30.8% were between the age group of 20-25 years; 46.2% were in the age group of 26-30 years and 23.1% were more 30 years of age among the positive COVID-19 patients. 8 of them were primigravida and 5 were multigravida. 9 (69.2%) were in the gestational age of 28-36 weeks and 4 (30.8%) were in the gestational age of 37-41 weeks.

Among the 13 positive women, 12 cases (92.3%) belonged to category A and 1 case (7.7%) belonged to category C who had maternal and perinatal mortality. Out of the 13 positive patients 4 (30.7%) delivered vaginally and 6 (46.1%) underwent lower segment caesarean section (LSCS) in view of obstetric indications like fetal distress, severe preeclampsia and non- progression of labour 3 cases (23%) were lost to follow up. 9 (90%) of neonates were negative for COVID-19.

Table 1: Prevalence of COVID-19 disease among study participants.

COVID-19	N	%
Positive	13	2.71
Negative	467	97.29

Table 2: Distribution of COVID-19 category among the study participants.

COVID-19	N	%
Category A	12	92.3
Category C	1	7.7

Table 3: Age distribution.

Age distribution (years)	N	%
20-25	4	30.8
26-30	6	46.2
>30	3	23.1

DISCUSSION

Our study showed that out of 480 pregnant women 13 (2.71%) were positive for COVID-19. Among the positive pregnant women 6 (46.2%) were in the age group of 26-30 years and 9 (69.2%) belong to the gestational age group of 28-36 weeks. When compared to the other studies, in our study we mainly concentrated on the positivity among the pregnant women and the pregnancy outcome among them. It has been observed among the positive pregnant women majority of them belong to category A 12 cases with no symptoms and no history of contact with the infected person and travelling. These positive patients were found out by the routine screening done in our hospital. Although adequate evidence is lacking to conclude the definite effect of this virus on pregnancy, it is hypothesised that relative suppression of cell-mediated immunity in pregnancy may be responsible for milder symptoms in COVID-19-positive pregnancies.[8]

One case with category C, a multipara with severe acute respiratory distress, eventually resulted in maternal and perinatal mortality. All the neonate were tested in our hospital and were negative for COVID-19. Except one perinatal mortality, all other neonates did well.

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.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

REFERENCES

1. Saadat S, Rawtani D, Hussain CM. Environmental perspective of COVID-19. Sci Total Environ. 2020;728:138870.
2. World Health Organization. Rolling updates on coronavirus disease (COVID-19). 2020. Available at: https://www.who.int/emergencies/diseases/novel-coronavirus-2019/events-as-they-happen. Accessed on 12 September 2022.
3. de Medeiros KS, Sarmento ACA, Costa APF, et al. Consequences and implications of the coronavirus disease (COVID-19) on pregnancy and newborns: A comprehensive systematic review and meta-analysis. Int J Gynecol Obstet. 2022;156:394-405.
4. Ryan GA, Purandare NC, McAuliffe FM, Hod M, Purandare CN. Clinical update on COVID-19 in pregnancy: A review article. J Obstet Gynaecol Res. 2020;46(8):1235-45.
5. Tabata S, Imai K, Kawano S, Ikeda M, Kodama T, Miyoshi K et.al., Clinical characteristics of COVID-19 in 104 people with SARS-Cov-2 infection on the Diamond Princess cruise ship: a retrospective analysis. Lancet Infect Dis. 2020;20(9):1043-50.
6. Peyronnet V, Sibiude J, Deruelle P, Huissoud C, Lescure X, Lucet JC, et al. SARS-CoV-2 infection during pregnancy. Information and proposal of management care. CNGOF. Gynecol Obstet Fertil Senol. 2020;48(5):436443.
7. Indian Council of Medical Research. Guidance for Management of Pregnant Women in COVID-19 Pandemic. 2020. Available at: https://www.icmr.gov.in/pdf/covid/techdoc/Guidance_for_Managemen

t_of_Pregnant_Women_in_COVID19_Pandemic_12042020.pdf. Accessed on 12 October 2022.

8. Royal College of Obstetricians and Gynaecologists. Coronavirus (COVID-19) Infection in Pregnancy [Internet] United Kingdom: Royal College of Obstetricians and Gynaecologists. 2020. Available at: https://www.rcog.org.uk/globalassets/documents/guidelines/2020-07-24-coronavirus-covid-19-infection-in-pregnancy.pdf. Accessed on 12 October 2022.

Cite this article as: Subramaniyan SK, Thagaraj M. Pregnant women with COVID-19: a study in tertiary care centre. Int J Reprod Contracept Obstet Gynecol 2022;11:3396-8.