

MATERNAL AND NEONATAL OUTCOME IN COVID POSITIVE PATIENTS: A PROSPECTIVE ANALYTICAL STUDY**Dr. Aarushi Chaudhary^{1*}, Dr. Richa Kansal², Dr. Vikas Dhillon³ and Dr. Gagandeep Kour⁴**¹Senior Resident, Department of Obstetrics and Gynaecology, Kalpana Chawla Government Medical College, Karnal.²Professor and Head, Department of Obstetrics and Gynaecology, Kalpana Chawla Government Medical College, Karnal.³Assistant Professor, Department of ENT, Kalpana Chawla Government Medical College, Karnal.⁴Assistant Professor, Department of Obstetrics and Gynaecology, Kalpana Chawla Government Medical College, Karnal.**Corresponding Author: Dr. Aarushi Chaudhary**

Senior Resident, Department of Obstetrics and Gynaecology, Kalpana Chawla Government Medical College, Karnal.

Article Received on 22/11/2020

Article Revised on 12/12/2020

Article Accepted on 01/01/2021

ABSTRACT

Introduction: The novel coronavirus disease (covid 19) is one of the most challenging diseases of all times. It becomes important to study the effects of this disease on pregnancy and its outcome. Hence the present study was undertaken to evaluate the effects of covid 19 on pregnancy and neonates. **Objective:** To evaluate the effect of covid 19 on pregnancy and neonate. **Material and Methods:** A prospective analytical study was carried out at Kalpana Chawla Government Medical College which is 300 bedded hospital of Haryana government. The study period was from april 2020 to September 2020. Informed consent was obtained. 44 patients with covid 19 meeting the inclusion and exclusion criteria were included in the study. They were admitted and managed for covid 19 with pregnancy. Outcome was noted for all patients and their babies and results analysed. **Results:** Out of a total of 44 patients, 21 landed up with cesarean section, 14 delivered normally, 7 antenatal pts were home quarantined after being treated for covid and one absconded. 6 babies required NICU admission, 35 were mother side, 3 were IUD. **Conclusion:** Covid 19 did not affect course of pregnancy, mode of delivery or neonatal outcome. Patients landed up in cesarean section due to obstetric causes. NICU admission of babies was due to maternal causes. Covid 19 was negative for all babies.

KEYWORDS: Covid 19, pregnancy, Neonate.**INTRODUCTION**

The novel coronavirus is a global health emergency (covid 19). The first case was notified to WHO on 31st december, 2019. The mode of transmission is by droplets when any patient sneezes or coughs. Incubation period is between 2 days to 2 weeks following an exposure. Till the time of writing this paper 32.7 million cases and 991,000 deaths have been reported to WHO.^[1] Understandably, this raises concerns regarding its effects during pregnancy. This is because pregnancy is associated with physiological changes in women which make them more prone to respiratory failure. Moreover, the available evidence, based on expert opinion and case series data, suggests expedited delivery to facilitate a 28% reduction in daily oxygen requirements to facilitate maternal stabilisation during respiratory failure^[2-6] Therefore this study has been undertaken to evaluate the effects of covid 19 on outcome of pregnancy and fetus. **Objective:** To evaluate the effect of covid 19 on outcome of pregnancy and neonate. **Material and Methods:** A prospective analytical study was carried

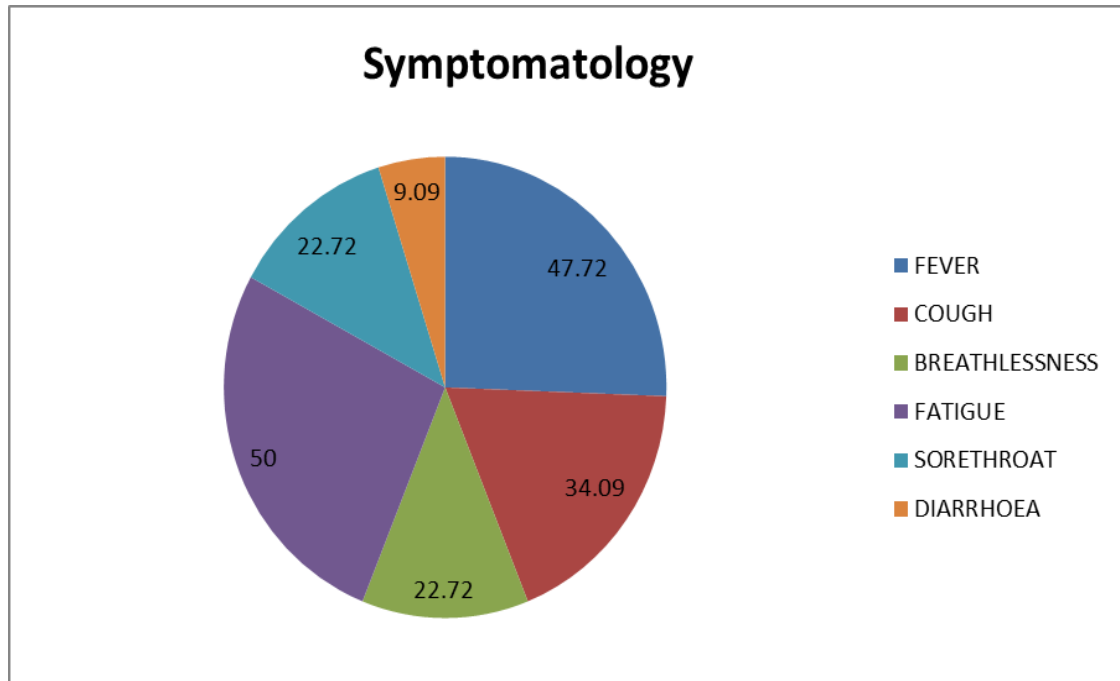
out at Kalpana Chawla Government Medical College which is 300 bedded hospital of Haryana government. The study period was from april 2020 to September 2020. Informed consent was obtained. 44 antenatal patients with covid 19 meeting the inclusion and exclusion criteria were included in the study. They were admitted and managed for covid 19 with pregnancy. Outcome was noted for all patients and their babies and results analysed. Covid 19 testing was done using RT PCR method.

Study population

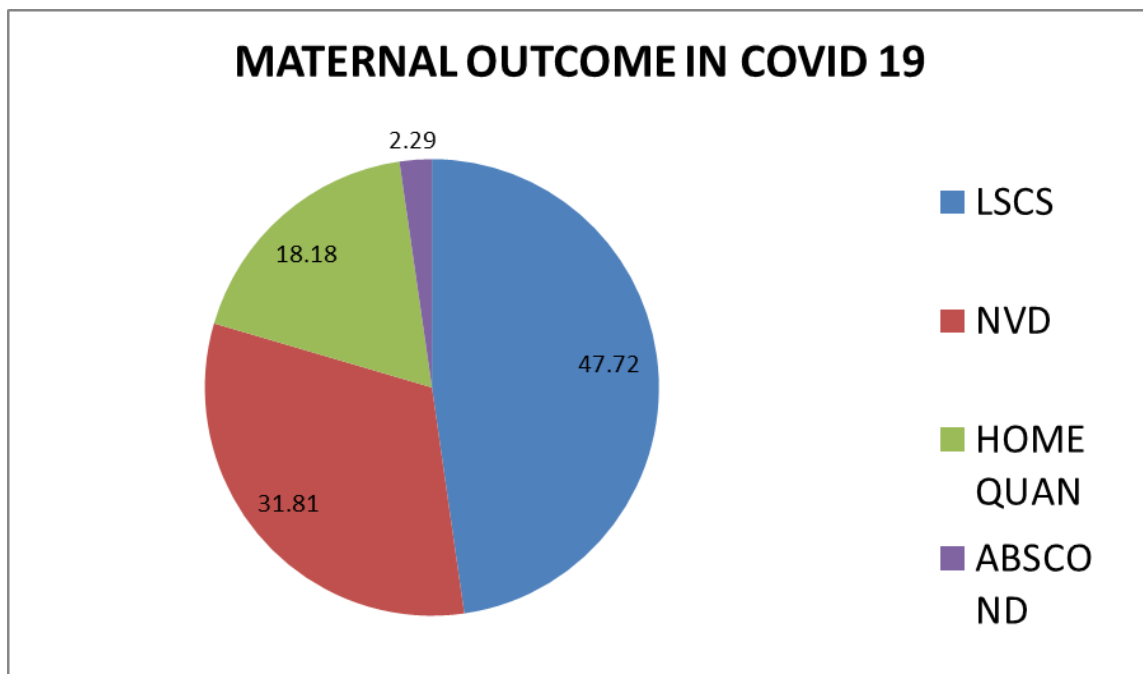
All antenatal patients who tested positive for covid 19 beyond 28 weeks period of gestation were included.

RESULTS

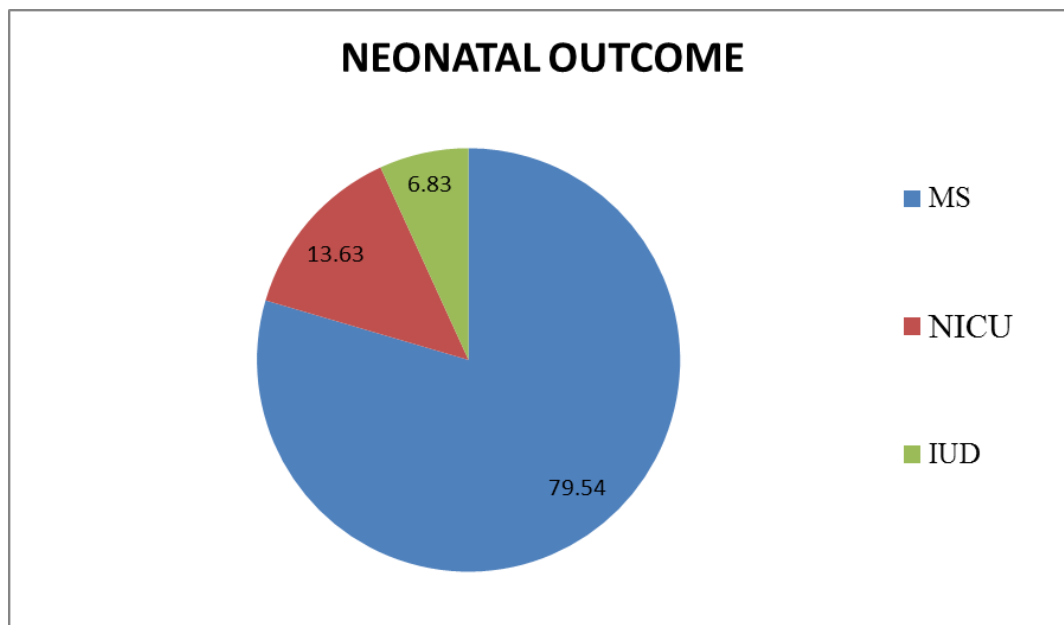
Of the total 44 patients, 22 were symptomatic (50%), 22(50%) were fatigued, 21(47.72%) had fever, 15(34.09%) had cough, 10 (22.72%) had breathlessness, 10 had sore throat (22.72 %), 4 had diarrhoea(9.09%)



Out of a total of 44 antenatal patients with covid 19, 21 (47.72%) landed up with cesarean section due to obstetric indications, 14 (31.81%) delivered normally, 7 (15.91%) were home quarantined after being treated for covid and one (2.29%) absconded.



6 (13.63%) neonates required NICU admission, 35(79.54%) were mother side, 3(6.83%) were IUD



DISCUSSION

During pregnancy, women undergo physiological changes that increase their susceptibility to severe respiratory infections and subsequent respiratory failure. Large proportion of patients were asymptomatic in our study. There was no maternal death or ICU stay of any patient. Patients landed up in cesarean section due to obstetric indications. As per data mentioned above, all patients recovered uneventfully. Prabhu et al^[7] reported similar results in antenatal patients with POG > 20 weeks POG. Most other studies including review article^[8] also had similar results. Covid 19 was negative for all babies. Nicu admission was due to maternal causes. Several studies have reported neonatal complications in some of the neonates^[9,10,11] whereas in some other studies, no neonatal complications were noted.^[12,13]

CONCLUSION

Covid 19 did not affect course of pregnancy, mode of delivery or neonatal outcome. Patients landed up in cesarean section due to obstetric causes. NICU admission of babies was due to antecedent maternal causes. Covid 19 was negative for all babies of covid positive mothers. Unfortunately, there is still not enough evidence about Covid 19 in pregnancy. Further studies must be conducted aimed at evaluating association between Covid 19 infection and antenatal and neonatal outcomes.

REFERENCES

1. WHO, Coronavirus disease Situation Report 85. 2020, World Health Organisation.
2. Mehta N., et al., Respiratory disease in pregnancy. Best Practice & Research Clinical Obstetrics & Gynaecology, 2015; 29(5): 598–611.
3. GRAVES C.R., Pneumonia in Pregnancy. Clinical Obstetrics and Gynecology, 2010. 53(2): 329–336.
4. Lapinsky S.E., Acute respiratory failure in pregnancy. Obstetric medicine, 2015; 8(3): 126–132.
5. Tomlinson M.W., et al., Does delivery improve maternal condition in the respiratory-compromised gravida? *Obstet Gynecol*, 1998; 91(1): 108–11.
6. Daily W.H., et al., Beneficial effect of delivery in a patient with adult respiratory distress syndrome. *Anesthesiology*, 1990; 72(2): 383–6.
7. Prabhu M, Cagino K, Matthews KC et al. Pregnancy and postpartum outcomes in a universally tested population for SARS-CoV-2 in New York City: a prospective cohort study, *BJOG* 2020.
8. Mimouni F, Lakshminrusimha S, Pearlman SA, Raju T, Gallagher PG, Mendlovic J. Perinatal aspects on the COVID-19 pandemic: a practical resource for perinatal–neonatal specialists. *J Perinatol*, 2020; 40: 1–7.
9. Chen H, Guo J, Wang C et al. Clinical characteristics and intrauterine vertical transmission potential of COVID-19 infection in nine pregnant women: a retrospective review of medical records. *Lancet*, 2020; 395: 809–15.
10. Zeng L, Xia S, Yuan W et al. Neonatal early-onset infection with SARS-CoV-2 in 33 neonates born to mothers with COVID-19 in Wuhan, China. *JAMA Pediatr*, 2020; 174: 722–5. 23
11. Schwartz DA. An analysis of 38 pregnant women with COVID19, their newborn infants, and maternal-fetal transmission of SARS-CoV-2: maternal coronavirus infections and pregnancy outcomes. *Arch Pathol Lab Med*, 2020; 144: 799–805. 26.
12. Hantoushzadeh S, Shamsirsaz AA, Aleyasin A et al. Maternal death due to COVID-19 disease. *Am J Obstet Gynecol*, 2020; 223: 109.e1–109.e16
13. Yu N, Li W, Kang Q et al. Clinical features and obstetric and neonatal outcomes of pregnant patients with COVID-19 in Wuhan, China: a retrospective, single-centre, descriptive study. *Lancet Infect Dis*, 2020; 20: 559–64.