Content available at: https://www.ipinnovative.com/open-access-journals

Panacea Journal of Medical Sciences

Journal homepage: http://www.pjms.in/

Original Research Article

COVID 19- A new challenge for safer antenatal care

Devdatt l Pitale[1]*, Shilpa Asthana[1]

[1]*Dept. of Obstetrics & Gyanaecology, INHS Asvini, Mumbai, Maharashtra, India*

ARTICLE INFO

Article history:
Received 02-04-2022
Accepted 28-12-2022
Available online 21-12-2024

Keywords:
Antenatal care
COVID19 pandemic
Maternal and fetal health
Protocolled ANC
Social distancing

ABSTRACT

Background : Antenatal care (ANC) is an indispensable component in the life of every expectant mother. Pregnancy per say is associated with physiological changes some of which may be undesirable like nausea, vomiting of pregnancy and may adversely affect the quality of life of the pregnant mother. The ongoing COVID pandemic continues to pose as a new challenge for safe and effective ANC due to very limited evidence available. COVID can cause severe disease in certain groups of population including mortality warranting extensive research. As of now standard protocol is lacking and social distancing appears to be the best possible preventive mechanism. This study aims to assess the benefits of protocolled Antenatal care during the COVID pandemic.

Materials and Methods: Present study was done at the obstetric department of two hospitals in Mumbai. 1500 expectant mothers satisfying the necessary criteria were enrolled.

Results: Most of the women in the study group were primi. They were enrolled for check-ups as per the study protocol. Normal delivery was conducted in 65 percent of cases and LSCS was performed for indicated cases only.

Conclusions: Antenatal care in COVID is a new challenge we are facing globally. A systematic protocol is eminent for the ANC in pandemic which is cost effective with easy learning curve. Nevertheless social distancing, personal hygiene including hand sanitizers, appropriate PPE will offer the best preventive measure for the COVID-19.

1. Introduction

Antenatal care (ANC) is an indispensable component in the life of every expectant mother. Pregnancy per say is associated with physiological changes some of which may be undesirable like nausea, vomiting of pregnancy and may adversely affect the quality of life of the pregnant mother. The ongoing COVID-19 pandemic has posed to be a challenge for safer and effective ANC taking into consideration the limited evidence about its effects on maternal and foetal health. [1]

The severity of Covid illness is a spectrum ranging from a mild illness to severe pneumonia especially in those with comorbidities and elderly groups of population. The spread may occur through respiratory mode including fomites. Flu, cough, malaise, headaches, and G.I symptoms are common symptoms seen and severe infection includes pneumonia with ARDS-like critical illness. [1–4]

Symptom based treatment in mild cases and multidisciplinary care in critical cases is the standard care protocol globally.

Current evidence raises concerns of pregnancy complications like mid trimester abortions, prematurity, adverse foetal outcomes in Covid positive mothers. Data to support vertical transmission of virus is still lacking and more research is essential to study the effects of Covid in expectant mothers and foetus. Protocol based ANC and social distancing appears to be the best preventive

* *Corresponding author*.
E-mail address: dipu.pitale@gmail.com (D. Pitale).

https://doi.org/10.18231/j.pjms.2024.115

mechanism available to combat COVID. This study aims to assess the benefits of protocolled Antenatal care during the COVID pandemic.

2. Materials and Methods

Type -Prospective observational study conducted in the Obstetrics departments of Naval Hospital Asvini and Sandhani between Feb 2021 – Jan 2022. 1500 expectant mothers satisfying the criteria were included for study.

2.1. Inclusion criteria

1. All ANCs
2. Women willing for ANC according to study plan.

2.2. Exclusion criteria

Risks such as hepatorenal disease, hypertension, medical disorders, RPL.

2.3. Method

1500 women who satisfied the above criteria were included in study. They were examined at intervals as per the current study protocol.

Present study COVID 19 specific ANC visit protocol is as follows- weeks of gestation.

1. First visit around 8weeks
2. Second visit around 13 weeks
3. Third visit around 24 weeks
4. Fourth visit around 32-34 weeks
5. Fifth visit around 37 weeks

Antenatal check-up was done as per the protocol which included general and obstetric examination, investigations and foetal growth profile with additional COVID appropriate measures. Mothers were counselled about the social distancing, self-monitoring of flu like symptoms. A dedicated helpline number was provided for telephonic consultation till the next scheduled visit.

2.4. Analysis

1. Observational method.
2. COVID specific Antenatal care protocol.

2.5. Outpatient clinic

The most effective strategy against COVID-19 is Prevention. Social distancing and COVID appropriate behaviour can prevent COVID transmission in the community. This is endorsed by leading organizations like American college of Obstetrics and Centre for disease control too.

Regular sanitization of frequently touched surfaces in OPDs, local hygiene, mask and shield use was encouraged. With the availability of Covid 19 vaccine all pregnancy mothers were positively encouraged and administered vaccine as per GOI guidelines.

2.6. Inpatient

COVID-19 testing within 5 days of expected day of delivery for all term cases was encouraged. In emergency cases extra care was emphasized with minimal staff.2

3. Result

Age parameters are shown in the Table 1.

Table 1: Characteristics of the women in the study.

(years)	**No (%)**
21-25	1200(80)
26-30	250(17)
31-35	50(03)
Total	1500(100)

As shown in the above table most of the participants were of 21-25 years (80%) and 26-30 yrs. Advanced age is an risk factor for critical COVID illness. Good immunity and maternal nutrition is important in prevention from Covid.

Parity is shown in below Table:

Table 2:

Para	**Total no. (%)**
Primi gravida	1300(87)
Multigravidas	200(13)
Total	1500(100)

As shown in the table 87% of the women in this study were primi. Their Antenatal check ups were scheduled as per the study protocol

Similar schedule has been studied by Hughes 3 as shown above.

ACOG has endorsed a triage system considering risk groups. It has included telemedicine and appointments.

This is an effective measure to prevent exposure by asymptomatic cases and will help to contain the spread of COVID globally.

In the current study, there were 700 deliveries as shown in above table. Out of this 65% were normal vaginal deliveries. LSCS was performed only in indicated cases. COVID 19 illness in itself is not an indication for the delivery or for operative intervention. Strict aseptic measures and preventive antibiotics were adopted, with Covid Appropriate behaviour and precautions.(Table 4)

In all cases, thus enabling bonding between the mother and too. Further research is needed to focus on protective role of breast milk over the COVID19. 4 COVID preventive dry runs including wearing of PPE kits were practiced regularly and followed effectively during opd and deliveries too.

Table 3: Low risk prenatal care visit schedule.

Gestatioonal age (In week)	Proposed visit	Tests	Explanation
8-12	Viability ultrasound New to nurse visit New OB provider		
12		Aneuploidy screening without ultrasound genetic counselling	
18-20	Return OB provider	Anatomy ultrasound	
24-26	Telehealth visit return OB visit		Schedule 6 weeks from prior visit
28-30	Return OB provider visit	3^{rd} trimester laboratories TDAP vaccine	
32-34	Telehealth visit return OB visit		Schedule 4 weeks from prior visit
36	Return OB provider visit	GBS screen	
37 until delivery	7-12 days return OB provider visits		
Postpartum	Telehealth 1-week mood check		

Table 4:

Mode	Number (%)
Vaginal including assisted Vaginal delivery	455 (65)
LSCS	245 (35)
Total	700 (100)

4. Discussion

ANC is a critical stage for healthcare practitioners to provide necessary care and educate them on adverse events. Safe and effective care is essential part of maternal and foetal health. This helps to promote healthy lifestyle, better nutrition, detecting and treating co-morbid conditions, counselling, and supporting.[5]

The WHO encourages eight contacts for ANC as it can decrease perinatal mortality significantly. It has emphasized on six physical presence visits and two by virtual mode during the Covid 19 pandemic thus stressing upon the need to follow a protocol based ANC and thus reduce travel during the lockdown restrictions. It also stresses upon role of community health care workers, mobile healthcare services, and media to tackle this challenge of COVID.[6]

Current data shows no reported COVID19 cases in early trimester. Its role in miscarriage and teratogenicity needs more research. In the present study pregnant women in early trimester did not have any adverse outcome. Similar results are seen in study by Alfa raj.[7,8]

There was no spontaneous abortion or gross anomalies noted during study period. Rasmussen et al, also showed no association of Covid and early pregnancy complications.[9]

Recent evidence lacks to show association of COVID in pregnancy and risk of critical illness.[10] The risk of exposure to asymptomatic cases is always there and increases health care stress.[11,12] This makes protocolled Antenatal care during the COVID a need of the hour.

In advanced maternal ages like preeclampsia, PPROM were not observed. Latest evidence also shows that COVID is not a risk factor for such adverse outcomes.[13]

Presently, evidence of COVID19 vertical transmission, breast milk and evidence of virus in the amniotic fluid, mucus secretions, cord blood is lacking.[14] No adverse neonatal outcomes were seen irrespective of mode of delivery in present study even with Exclusive breast feeding.

In this study most of women delivered vaginally. LSCS was reserved for obstetrics Emergencies with valid indication only. COVID is not an indication for confinement including the Operative delivery.[15]

5. Conclusion

COVID has been the worst pandemic ever and has overburdened the global health care with at enhanced risk of infection without stringent protocols. COVID is not known to cause adverse outcomes in pregnancy but still it is a challenge. A protocolled care is important for effective management of pregnancy during pandemic. It is cost effective and has and good learning curve. This coupled with the social distancing and use of appropriate, personal hygiene not limited to hand sanitizers offers the only preventive measure for COVID today

6. Source of Funding

None.

7. Conflict of Interest

None.

References

1. Pitale D. Antenatal Care During the COVID-19 Pandemic. Available from: https://ssrn.com/abstract=3719067orhttp://dx.doi.org/10.2139/ssrn.3719067.
2. CDC. What Healthcare Personnel Should Know about Caring for Patients with Confirmed or Possible COVID-19 Infection. Available from: https://stacks.cdc.gov/view/cdc/86544.
3. Dotters-Katz SK, Hughes BL. Considerations for Obstetric Care during the COVID-19 Pandemic. *Am J Perinatol*. 2020;37(8):773–9.
4. Interim Guidance on Breastfeeding for a Mother Confirmed or Under Investigation For COVID-19. Available from: https://www.e-lactancia.org/media/papers/Interim_Guidance_on_Breastfeeding_for_a_Mother_COVID-19-CDC-2020.pdf.
5. Uwambaye P, Nyiringango G, Musabwasoni SMG, Husain A, Nessa K, Razzaque MS, et al. COVID-19 Pandemic: Adaptation in Antenatal Care for Better Pregnancy Outcomes. *Front Glob Womens Health*. 2020;1:599327. doi:10.3389/fgwh.2020.599327.
6. Uwambaye P, Nyiringango G, Musabwasoni SMG, Husain A, Nessa K, Razzaque MS, et al. COVID-19 Pandemic: Adaptation in Antenatal Care for Better Pregnancy Outcomes. *Front Glob Womens Health*. 2020;1:599327. doi:10.3389/fgwh.2020.599327.
7. WHO. New Guidelines on Antenatal Care for a Positive Pregnancy Experience; 2019. [accessed October 10, 2019]. Available from: https://www.who.int/reproductivehealth/news/antenatal-care/en/(accessedOctober10.
8. Alfaraj SH, Al-Tawfiq JA, Memish ZA. Middle east respiratory syndrome coronavirus (MERS-CoV) infection during pregnancy: report of two cases and review of the literature. *J Microbiol Immunol Infect*. 2019;52(3):501–3.
9. Rasmussen IS, Mortensen LH, Krause TG, Andersen AN. The association between seasonal influenza-like illness cases and foetal death: a time series analysis. *Epidemiol Infect*. 2018;147:e61. doi:10.1017/S0950268818003254.
10. Liu Y, Chen H, Tang K, Guo Y. Clinical manifestations and outcome of SARS-CoV-2 infection during pregnancy. *J Infect*. 2020;S0163-4453(20):30109–2. doi:10.1016/j.jinf.2020.02.028.
11. Report of the WHO-China Joint Mission on Coronavirus Disease 2019 (COVID-19); 2020. [Accessed April 8, 2020]. Available from: https://www.who.int/publications/i/item/report-of-the-who-china-joint-mission-on-coronavirus-disease-2019-(covid-19).
12. Liao S, Liao E, Cao D, Gao Y, Sun G, Shao Y, et al. Clinical analysis of pregnant women with 2019 novel coronavirus pneumonia. *J Med Virol*. 2020;92(9):1556–61.
13. Wang X, Zhou Z, Zhang J, Zhu F, Tang Y, Shen X, et al. A case of 2019 Novel Coronavirus in a pregnant woman with preterm delivery. *Clin Infect Dis*. 2020;71(15):844–6.
14. Dong L, Tian J, He S, Zhu C, Wang J, Liu C, et al. Possible Vertical Transmission of SARS-CoV-2 From an Infected Mother to Her Newborn. *JAMA*. 2020;323(18):1846–8.
15. Giuliani F. Vaginal vs cesarean delivery for COVID-19 in pregnancy. *Am J Obstet Gynecol*. 2023;228(3):358–9.

Author's biography

Devdatt l Pitale, Associate Professor

Shilpa Asthana, Associate Professor

Cite this article: Pitale D, Asthana S. COVID 19- A new challenge for safer antenatal care. *Panacea J Med Sci* 2024;14(3):650-653.