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Management of Pregnant Women in Covid 19

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ABSTRACT

Coronavirus disease 2019 (COVID-19) is a respiratory ailment caused by SARS-CoV-2, a highly contagious and fatal beta coronavirus that has spread fast over the world, necessitating a pandemic proclamation. The aim of this article is to review the most recent research on how COVID 19 impacts pregnant women, as well as the most up-to-date information on treatment options, psychological effects, and the overall impact on healthcare services and resources. These infection prevention and control recommendations are for healthcare facilities that provide obstetric services to pregnant patients with COVID-19 or pregnant Persons Under Investigation (PUI) in obstetric settings like obstetrical triage, labour and delivery, rehabilitation, and inpatient postpartum settings. These concerns are based on the limited evidence available on COVID-19 virus transmission to date, as well as knowledge of other viruses that cause serious respiratory illness, such as influenza, SARS-CoV-2, and the Middle East Respiratory Syndrome coronavirus (MERSCoV).

KEY WORDS: COVID-19, PREGNANT WOMEN, BREAST FEEDING.

INTRODUCTION

Pregnant women are no more susceptible to illness than the rest of the population. Pregnancy, on the other hand, affects the immune system and the body's response to viral infections in general, which can lead to more severe symptoms in some situations, like with COVID-19. COVID-19 pneumonia in pregnancy has been reported to be milder and to recover quickly. In other forms of coronavirus infection, the hazards to the mother seem to increase during the last trimester of pregnancy (SARS, MERS). Preterm birth has been reported in COVID-19-positive women, however it's unclear if the preterm births were always iatrogenic or if some were unintentional. Women with heart disease who are pregnant are at the highest risk (congenital or acquired).

In June 2020, the Centers for Disease Control and Prevention (CDC) released surveillance data based on pregnancy status on SARS-CoV-2-related outcomes in reproductive-aged women. Among the 326,335 women aged 15 to 44 years who tested positive for SARS-CoV-2, pregnant women were more likely to be hospitalised, admitted to an intensive care unit (ICU), and require mechanical ventilation. However, the overall absolute rise in rates of ICU hospitalisation and mechanical ventilation across pregnant and non-pregnant women was poor (1.5 percent vs. 0.9 percent for ICU admission, respectively, and 0.5 percent vs 0.3 percent for mechanical ventilation, respectively). The death rates from COVID-19 were comparable in both pregnant and non-pregnant people. Preterm birth or pregnancy loss were not assessed as pregnancy consequences.

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Clinical Staging Of Confirmed Covid- 19 Pregnant Patients

- Mild (URTI)– Groups A, B and C
- Moderate (Pulmonary involvement with hypoxia) – Group D and E
- Severe (Pulmonary involvement with hypoxia with sepsis/septic shock/multi organ dysfunction syndrome) –Group F

MILD – GROUP A

- Asymtomatic but positive for covid 19
- Isolation ward(ccc)/ Home isolation
- Investigations – CBC, RFT, RBS, LFT, ECG
- Treatment : Tab vitamin C 1000 mg OD, tab zinc 50 mg OD, Vit D 6000 iu stat
- Monitoring of vitals, temp. spo2

MILD – GROUP B

- Symtomatic / URTI without co morbidity

: Fever, Dry cough, Sore throat, malaise
Headache, Anosmia, loss of taste
Diarrhoea
Red flag signs

1. Neutrophil Lymphocyte ratio >3.5
2. Resting tachycardia, 6 min exercise induced hypoxia
3. Spo2 <94% on room air

- Isolation ward/Home isolation
- Investigations – CBC, RFT, LFT, RBS, ECG, CXR, Spo2 monitoring

Treatment:

- Tab Favipiravir – no evidence found
- Cap Doxycycline 100 mg bd
- Tab Ivermectin 12 mg Od for 5 days
- Tab vit C, tab zinc, vit D
- Symptomatic treatment as antipyretics, adequate nutrition and appropriate rehydration
- Patient is to be followed up daily for temperature, vitals and spo2.

MILD – GROUP C

- Symptomatic / URTI with co morbidity
- > 60 years
- Obesity, Diabetes mellitus
- HTN / IHD
- Chronic conditions like CKD, CLD/COPD
- Immunosuppressive drugs and other
- Immunocompromised state

Investigations –
CBC, RFT, RBS, LFT, ECG(daily), CXR ABG, ESR, CRP, LDH, Serum ferritin, D-dimer (If QTc prolongation on ECG , then daily serum electrolytes, ionic calcium and magnesium).

Treatment:

- Tab Cefixime 200 mg BD OR
- Tab Augmentin 625 mg TDS OR
- Tab Azithromycin 500 mg OD plus
- Tab.Favipiravir (doubtful)
- Tab vit c, tab zinc, vit d
- Inj. LMWH 40 mg SC OD (if D dimer more than 2 to 3 times than normal)

If patient is symptomatic at day 5, then continue therapy for additional 5 days.

Moderate

- Pneumonia (LRTI)
- It is associated with presence of dyspnea, fever, cough along with spo2 <94 %(90-94) on room air, RR>24/min.
- Investigations – CBC, RFT, RBS, LFT, ECG,(daily) CXR, ABG, ESR, CRP, LDH, Serum ferritin, D-dimer,(48-72hrly)
- (If QTc prolongation on ECG, then daily serum electrolytes,
- ionic calcium and magnesium)
- Dedicated covid hospital / SOS ICU

Treatment:

- Inj Ceftriaxone 1 gm iv BD for 5 -10 days +
- Inj Remdesivir (if benefits outweighs risk)
- vit c, zinc, vit D
- Inj. LMWH 40mg SC OD
- If SPO2 <94 % consider 1.CARP protocol
- 2.inj.MPS 40 mg iv BD, or Inj dexamethasone 6 mg iv od for 10 days

Severe

- Severe Pneumonia/ARDS/Septic shock/ Sepsis

It is associated with clinical signs of pneumonia plus RR>30/min / sever respiratory distresss / Spo2 <90% on room air.
Red flag signs

1. Neutrophil lymphocyte ratio >3.5
2. PaO2/FiO2 <300
3. Raised CRP / serum ferritin / Ddimer / LDH / Triglycerides / Trop I

CPKMB>twice upper limit of normal

Investigations – CBC, RFT, RBS, LFT, ECG,(daily) CXR PA, ABG, Bl. Culture, ESR, CRP, LDH, Serum ferritin, D-dimerTROP I ,CPKMB (If QTc prolongation on ECG, then daily serum electrolytes, ionic calcium and magnesium,)
Isolation in ICU

Treatment:

- Inj. Meropenem 1 gm iv TDS extended infusion over 3 hours +
- Inj remdesivir (if benefits outweighs risk) +
- Inj.LMWH 40 mg s/c od If D dimer is raised three fold then LMWH given in therapeutic dose 40mg SC BD.

1. CARP protocol
2. inj.MPS /inj dexa

If raised IL6, d dimers and ferritin, then add inj Toclizumab 9if benefit outweighs risk) (400 mg in 100

ml NS over 1 hour)
- Vit c, zinc, Vit d

Management

Antenatal care
- Women should be advised to attend frequent antenatal treatment, customized to a minimum, at the discretion of the maternal care provider at 12, 20, 28, and 36 weeks of pregnancy unless they meet existing self-isolation standards.
- Unless symptoms (other than a persistent cough) become serious, appointments for women who have had symptoms should be postponed until 7 days after the commencement of symptoms. It's crucial to keep track of how many times the foetus kicks.
- If she has to go to the hospital, she can either drive herself or call 108, telling the ambulance crew of her condition.
- Appointments for women who have self-quarantined because a family member may have COVID-19 symptoms should be postponed for 14 days.
- Any woman who has had her normal appointment pushed out for more than three weeks should be notified. (In rural regions, ANMs/ASHAs may call people or make regular visits with PPE to their houses.)
- Even if a woman has previously tested negative for COVID-19, if she develops symptoms again, COVID-19 should be considered.)Following the resolution of acute illness, referral to antenatal ultrasound services for foetal development surveillance is recommended after 14 days. 6,7

Intrapartum Care
- A multidisciplinary team, including an infectious diseases or medical professional, should assess the severity of COVID-19 symptoms.
- The delivery should preferably take place at a tertiary care facility.
- The mother's temperature, respiration rate, and oxygen saturations are all monitored. Cardiotocograph-based electronic foetal monitoring (CTG)
- Maintain an oxygen saturation of >94% by adjusting oxygen therapy as required.
- If the woman exhibits sepsis symptoms, examine and treat her as directed in the sepsis in pregnancy recommendations, but additionally consider active COVID-19 as a possible cause of sepsis and investigate accordingly.
- In the presence of coronaviruses, there is no indication that epidural or spinal analgesia or anaesthesia is contraindicated. In women with suspected or confirmed COVID19, epidural analgesia should be prescribed during labour to reduce the need for general anaesthesia if an urgent delivery is required.
- If a caesarean section or other surgical treatment is necessary, the surgery should be carried out while wearing personal protective equipment (PPE).
- If a symptomatic woman is growing exhausted or hypoxic, an individualized decision on elective assisted birth to decrease the duration of the second stage of labor should be made.

Postnatal Management: It's unknown whether COVID-19-positive newborns are more likely to develop significant problems. Because of the contact with contagious respiratory secretions, transmission after delivery is a problem. Facilities should consider temporarily separating the mother who has reported COVID-19 or is a PUI from her daughter (e.g., separate rooms) until the mother's transmission-based measures are removed.9

Precautions for Pregnant Women
- Using an alcohol-based hand rub or soap and water to wash your hands regularly.
- Maintaining a safe distance between yourself and others when avoiding crowded areas. When keeping enough physical space between yourself and others is impossible, wear a non-medical cloth mask. Do not touch your eyes, nose, or mouth.
- Taking care of one's lungs. When you cough or sneeze, cover your mouth and nose with your bent elbow or a tissue. Then throw away the used tissue right away.
- If you have a fever, a cough, or are having trouble breathing, see a doctor as soon as possible. Before visiting a health centre, call ahead and follow the local health authority's instructions.
- Pregnant women and women who have recently given birth should keep their regular doctor's appointments, according to local laws, and take appropriate precautions to prevent the virus from spreading.

Vaccination in Pregnancy and Lactation
- Pregnant women have been excluded from trials evaluating COVID-19 vaccines, thus safety and efficacy data are limited.
- Up to date suggest COVID-19 vaccination for pregnant women rather than deferring vaccination until after delivery, particularly for those at higher risk of exposure or severe disease if infected.
- Although pregnancy itself is associated with an increased risk of severe infection, some patients may reasonably elect to defer vaccination after weighing their personal risk of COVID-19 exposure and disease severity against the limited data regarding the safety and efficacy of COVID-19 vaccines during pregnancy.
- Vaccination should be timed so that patients do not receive COVID-19 vaccines within 14 days of receipt of a routinely administered vaccine.
- However, a shorter interval between COVID-19 vaccines and other vaccines is reasonable when timely administration of another vaccine is important (eg, tetanus vaccination during wound management) or if it would avoid unnecessary delays in COVID-19 vaccination.
- Vaccination is not thought to affect fertility, and it is not necessary to delay pregnancy after vaccination.

Recommendation:
The World Health Organization and the US Centres for Disease Control and Prevention encourage pregnant women to follow the same infection-prevention guidelines as the general public, such as covering coughs, avoiding contact with sick people, and washing hands with soap and water or sanitizer.

CONCLUSION

Infection with COVID-19 during pregnancy increases the risk of pregnancy complications such as preterm birth, PPROM, and, in extreme circumstances, maternal death. There is no proof that SARS-CoV-2 infection can be transmitted vertically to an unborn child.

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