



**A SINGLE CASE STUDY ON POOR OBSTETRICAL OUTCOMES INCLUDING
MATERNAL MORBIDITY, MORTALITY MAY OCCUR AS A RESULT OF COVID-
19(CORONAVIRUS) DISEASE IN PREGNANCY**

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ABSTRACT

The emergence of a novel coronavirus, termed SARS-CoV-2, and the potentially life-threatening respiratory disease that it can produce, COVID-19, has rapidly spread across the globe creating a massive public health problem. Previous epidemics of many emerging viral infections have typically resulted in poor obstetrical outcomes including maternal morbidity and mortality and death. Atypical pneumonia known as corona virus disease (COVID-19) caused by severe acute respiratory syndrome corona virus 2 (SARS-CoV-2) is highly infectious and is currently spreading rapidly around the globe.^[1] Viral pneumonia is associated with maternal and neonatal morbidity and mortality during pregnancy.^[2] Several studies focusing on infected patients from the general population have been reported, however, limited information is available in the aspects of pregnancy outcomes of COVID-19 infected women. Until now, Chen et al.^[3] reported the maternal-neonatal outcomes and vertical transmission potential of COVID-19 pneumonia in pregnant women in the third trimester of pregnancy with an infection history of a maximum of 7 days. The objective of our study was to remind that poor obstetrical outcomes including maternal morbidity, mortality may occur as a result of covid-19 (corona virus) disease during pregnancy.

KEYWORDS: COVID-19(CORONA VIRUS DISEASE 2019), pregnancy, maternal mortality RT- PCR (reverse transcription–polymerase chain reaction),SARS-CoV-2 (Severe Acute Respiratory Syndrome Corona virus 2).

INTRODUCTION

This newly emergent corona virus was isolated in China in early January 2020, initially referred to as 2019-nCoV and subsequently termed SARS-CoV-2 – the disease it produces has been termed COVID-19.^[4] Since then it has become an increasingly widespread and important causes of respiratory infection which can progress to severe pneumonia and, in a small number of cases, death.COVID-19 was declared a pandemic by the World Health Organization on March 11, 2020.^[5] Pregnancy increases the risk of adverse obstetrical and neonatal outcomes from many respiratory viral infections .The physiologic and immunologic changes that occur as a normal component of pregnancy can have systemic effects that increase the risk for complications from respiratory infections. Changes in the cardiovascular and respiratory systems, including increased heart rate, stroke volume, oxygen consumption, and decreased lung capacity, as well as the development of immunologic

adaptations that allow a mother to tolerate an antigenically distinctive fetus, increase the risk for pregnant women to develop severe respiratory disease.^[6] Outcomes data from multiple studies of influenza have demonstrated an increased risk of maternal morbidity and mortality when compared with non-pregnant women.^[6,7]

CASE REPORT

26 year old female with history of 7 month amenorrhea (Pregnancy) came with following complaints. 1. Cough since two days.

2. Shortness of breath since two days.

After examination Diagnosis of bilateral pneumonia was made and treatment was started immediately. She was not having any preexisting chronic condition such as diabetes, cardiovascular disease or hypertension.

Screening for covid-19 was done (Nasal swab and nasopharyngeal swab). She was put on high flow oxygen via nasal probe and other supportive measures taken. Her report came covid-19 positive by RT-PCR method. On Obstetric examination she was G2P1L1 with per abdominally appears 26-28 weeks with fetal parts palpable. Per vaginally OS closed and uneffaced. She was under continuous monitoring and on treatment according to ICMR guidelines Tab Hydroxychloroquine (HCQ'S), Tab Azithromycin and Tab oseltamivir and tab vitamin C continued. she started Antiviral also. Her investigation shows leukocytosis (23,900 /mm³) with lymphocytopenia (15.4%) and chest x-ray (shielded) abnormal. Her ABG shows decreased PO₂. Random blood sugar- 81 mg/dl, blood urea-62mg/dl, serum Creatinine-1.3, Sr. Na+ -141 mmol/L, Sr. K+ -4.1mmol/L, SGOT-32 IU/L, SGPT-47 IU/L, Sr. Alk. Phosphatase-129 IU/L, Hb-9.1 (after one unit of PRBC transfusion), Blood group = A positive(+), BT-2min. 10sec, CT-3min. 40sec. she was on dual antibiotics. Inj. Enoxaparin also started. Despite of all this efforts she was deteriorating clinically and radiographically. As patient started deteriorating she was intubated and ventilator support was started. All the supportive treatment including vasopressors were started. In spite of continuous best possible treatment and care she died along with her intrauterine fetal death due to complication of covid-19.

DISCUSSION

Alfaraj *et al.*,^[8] reported a case series of 11 patients with MERS-CoV infection where the case fatality rate was 35% for pregnant women and 27% for infants. Current evidence suggests the possibility of severe maternal morbidity requiring ICU admission and perinatal death with COVID-19 infection in pregnancy. Pregnant women were more than four times more likely to be admitted to the hospital for 2009 swine-origin influenza A (H1N1) than the general population.^[9] According to a previous report, approximately 50% of pregnant women with SARS were sent to the ICU, approximately 33% of pregnant women with SARS needed mechanical ventilation, and the death rate of pregnant women with SARS was as high as 25%.^[10] The most common onset symptoms for the pregnant women with COVID-19 pneumonia in our study were cough and shortness of breath. Lymphocyte count reduction was common at laboratory examination. Chest x-ray (shielded) was abnormal. Hence Pregnant women and their newborns should be evaluated carefully for being potential risk groups in the current COVID-19 pandemic are necessary.

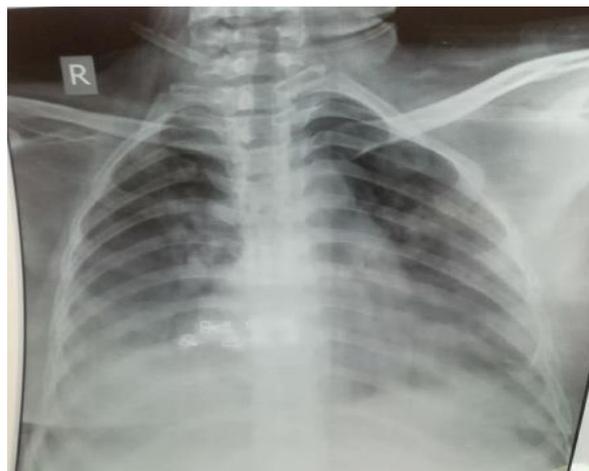


Fig. 1: Chest X-Ray (shielded) of 26yr third trimester pregnant female (7 month), on day 0 (on day of admission) showing bilateral consolidation, moderate-severe with periphery and lower lobes predominance.



Fig. 2: CXR (shielded) of same pt. on day 2nd shows worsening with severe bilateral consolidation with periphery and lower lobes predominance.

#	1404290420	-B
Date	14.04	29.04.20
Sample		BLOOD
BP	719	mmHg
TEMP	37.0	C
Hb-Std	15.0	g/dl
FIO ₂	20.9	%
RO	0.85	
PO ₂	49.1	mmHg
PCO ₂	31.1	mmHg
PH	7.392	
K	4.78	mmol/L
NA	134	mmol/L
CL	97	mmol/L
HC03A	18.3	mmol/L
HC03S	20.8	mmol/L
BE	-5.3	mmol/L
BE ECF	-6.6	mmol/L
TCO ₂	19.1	mmol/L
BB	42.7	mmol/L
HCT	45.0	%
O ₂ SAT	84.7	%
O ₂ -CT	17.2	%
P50	27	mmHg
AR002	55.9	mmHg
SHUNT	3.5	%
A GAP	23.2	mmol/L
H+	40.6	nmol/L

Acid / Base Status

Fig. 3: ABG showing decrease SPO₂.

CONCLUSION

The Purpose of our study is to remind that severe maternal morbidity requiring ICU admission and poor obstetrical outcomes including maternal morbidity, mortality and death may occur as a result of covid-19 (corona virus) disease in pregnancy.

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