

## Impact of Covid-19 in Pregnancy

Priyanka Kabra, Sandhya Pajai\*, Amardeep Tembhare

Department of Obstetrics and Gynecology, Jawaharlal Nehru Medical College, Datta Meghe Institute of Medical Sciences (DU), Sawangi (Meghe), Wardha, India

### ABSTRACT

*Background: Still birth rate is very much high in developing countries and very high in developed countries and shown little or very less improvement since the past 20 years. Preventive strategy which reduces risk factors could be important in rate reduction of foetal & maternal mortality rate, with Hepatitis B and Covid 19. Mother infected with Hepatitis b and covid 19 are an important public health problem, because this not only affects the maternal health but also the foetal outcome. Fetuses born to this mother have quite low immunity.*

*Hep B is a very serious disorder which affects foetal outcome. Hepatitis B is transmitted by parenteral route. Parenteral route means this virus can be introduced by all routes except through the intestinal tract.*

*Case description: A36 -year-old female with the history of G5P2L1A2D1 and with 40 weeks of gestational period with previous 2 Abortions and is a case of chronic Hepatitis B. On admission, she was having amenorrhea. Her lab investigation reports suggested she's Covid 19 Positive. She was kept in medicine ICU where her labour progressed and she delivered a dead baby boy.*

*Objectives: Female examined the causative factors, treatment plans, recovery in pregnancies with Hepatitis B and Covid 19.*

*Conclusion: Infection of Hepatitis B with covid 19 while pregnancy is linked with more mother and foetal morbidity. Quick screening, seeing for complications, monitoring, and intervention are helpful in reduction of mother and foetal adverse effects, especially in high-risk pregnancy cases. Pregnancy gives a chance to physician to control or stop the disease progression and start healthy life.*

**Key words:** Hepatitis B, Mild hydroureter nephrosis, Intrauterine death, Covid 19

**HOW TO CITE THIS ARTICLE:** Priyanka Kabra, Sandhya Pajai, Amardeep Tembhare, Impact of Covid-19 in Pregnancy, J Res Med Dent Sci, 2022, 10 (10): 151-153.

**Corresponding author:** Sandhya Pajai

**e-mail**✉: sandhyapajai@gmail.com

**Received:** 03-Oct-2022, Manuscript No. JRMDs-22-76717;

**Editor assigned:** 05-Oct-2022, PreQC No. JRMDs-22-76717(PQ);

**Reviewed:** 19-Oct-2022, QC No. JRMDs-22-76717(Q);

**Revised:** 24-Oct-2022, Manuscript No. JRMDs-22-76717(R);

**Published:** 31-Oct-2022

### INTRODUCTION

The occurrence of COVID 19, HEPATITIS B in pregnancy increases the risks both, the foetus and the mother's life. Hepatitis b can be normally transmitted from a pregnant female to her offspring and this can occur in normal delivery as well as in the caesarean section delivery. There is as such no treatment for prevention of hepatitis b transmission from mother to baby, but if we give first dose of hepatitis b vaccine as soon as possible then

chances of baby getting affected by hepatitis b decrease despite improvement in its treatment strategies, it still remains the risk factor during pregnancy. Hepatitis b is a serious disorder which is transmitted by a direct contact with body fluids of an infected mother to her child and the transmission of Covid 19 by parenteral route is not yet confirmed. Its occurrence in pregnancy affects mother and foetus. Hepatitis b is due to HBV virus, which is transmitted through semen or blood or via saliva of infected person. Children born to infected mother with Hepatitis B are 90% infected and transmission of covid 19 from breast milk is not yet confirmed. So, babies born to covid 19 positive mother are not breastfed. As a result, their immunity is compromised during infancy so they are prone to several diseases during infancy [1].

### CASE DESCRIPTION

A 36-year-old woman with, presented at 40 weeks of

gestational age. Fever since 12 days, she's having body ache since 12 days, breathlessness since this morning. She is a known case of Hepatitis B. Also have of severe metabolic acidosis and HEELP syndrome with septic shock and also having a history of mild right hydro ureter nephrotic due to distal ureteric calculus as suggestive by USG. She also has a history of previous 2 abortions. She is also infected with covid 19 viruses. On general examination, she is moderately built, well nourished, well oriented to place, time and person. On systemic examination she is tachycardic, hypotensive. Foetal heart sound was not heard by doppler. Investigation showed she's having proteinuria, serum urea 70mmol/l, serum creatinine 4.3mg/dl, Lactate 12.0 mmol/l, serum sodium 136mmol/l, serum potassium.

How to cite this article: Priyanka Kabra, Sakshi Sharma. Impact Covid 19 in Pregnancy.

### Management

Patient is induced with 10 IU of Pitocin the rate of 8-10 drops per minute. Following she developed one episode of seizure. Injection diazepam 2ml is given. Patient is then intubated with ET tube. Under all aseptic precautions male still birth baby is born and is delivered by vertex presentation with kiwi vacuum application. Episiotomy was not given. Baby not shown any signs of life after delivery. Blood loss is moderate. Medical treatment for managing post-partum haemorrhage in the form of abdominal uterine massage, INJ oxytocin 40 units, INJ ergometrine 0.5mg IM, INJ Carbo Prost 0.25mg IM (3 Doses every 15 mins) Despite of all these measures uterus was still atonic and uterine tamponade was inserted with 150 ml normal saline. 1 unit of whole blood transfusion, 6 units of platelets transfusion. Patient then transfused with 6 units of fresh frozen plasma. Patient also have severe acidosis from the day of hospitalization and during operation and then after operation for which she managed nicely. Post-mortem examination of the foetus confirmed dead child with no anomalies. After staying in ICU for some period patient was recovered and discharged from the maternity care. Factors manifesting to increased risks of stillbirth because of covid during pregnancy. Foetal infection based on the fact that, individual or particularly fetuses with quite low immunity are more prone to SARS Cov2 infection and also SARS Cov2 patients are more susceptible to different bacterial infection so the occurrence of septicemia in pregnant women is high, and it will directly affect foetal viability.

Thromboembolism, as many studies shows that COVID 19 infection is associated with thromboembolic complications that can cause placental insufficiency and hence foetal mortality or morbidity.

Respiratory failure or respiratory distress is a very well-established concept. SARS affects the respiratory system mainly. It causes various degrees of pneumonia those results in hypoxemia that is low oxygen supply to the blood. On the foetus, hypoxemia has very dangerous

side effects through intrauterine growth restriction, inflammation, surfactant deficiency, uteroplacental insufficiency and Various neurological disorder like cerebral palsy which collectively can cause foetal death [2]. Anaemia, as there is increasing concern about COVID -19 causing anaemia based on laboratory reports of low RBCs count in SARS Cov2 patients. Some researchers explain that by some viral protein that attach beta chain of RBCs HB, that will destroy or decrease its compatibility to transfer oxygen. On the other side, anaemia is known to cause low birth weight babies, preterm labour and low APGAR score, which contribute to foetal demise [3]. An immunocompromised mother because of various co morbidities like tuberculosis, asthma, hypertension, diabetes mellitus, and hepatitis b can increase the risk of still birth.

### DISCUSSION

Stillbirth rate is rising very rapidly due covid pregnancy. There is less information available on the current COVID-19 outbreak on women affected during pregnancy along with superimposed Hepatitis b infection. In Comparison with SARS, COVID-19 appears to be very less dangerous. Women hospitalized with COVID-19 caused 47% preterm delivery, which may affect largely neonatal services. Delivery method is determined usually by obstetrician. From the currently available data, an increment in the risk of abortion in women influenced by COVID-19 cannot be ruled out at this point of time, given the SARS data. Data from early pregnancy units are needed on affected women and matched controls. In women influenced by COVID-19 with ongoing pregnancy, surveillance for foetal growth restriction would be reasonable, given the acute and chronic placental changes observed in SARS pregnancies and with 2/3 of those that were ongoing being affected by IUGR after SARS infection, and that abruption placenta was noted in a case influenced by MERS. The need of foetal monitoring includes series of USG scans, of women with COVID-19. It is quite difficult for maternity homes. Women need to be monitored in their local maternity units, with transfer to higher centers with appropriate neonatal intensive care facilities for delivery. Infected mother with COVID-19 reported preterm deliveries [4].

In COVID-19, if maternal illness is not that much severe, then the mode of delivery will be based more on obstetrician doctor. Information on vertical transmission that is (foetal to mother) of COVID infection is very limited, though 15 neonates born to mothers with COVID-19 infection were not positive. Guidance from China says that 'late cord clamping' should not be recommended. China states that 'babies should not be breastfeed from mothers with confirmed or suspected COVID 19'. Chest X-ray should be done frequently in pregnant women. There is need for systematic data reporting on women affected by COVID-19 and their pregnancies to provide an evidence base for diagnosis, intervention, managing, treating and prevention of further female patients



Figure  
exam

infected with COVID 19. Neonates who were infected with covid were mostly asymptomatic or showing very less symptoms like respiratory difficulty, babies born to covid 19 positive mothers were showing high rate of admission NICU. There may be high chance of transmission by air [5].

#### Precipitating factors

Difficulty in diagnosis, Suspected COVID 19 patients usually present with fever, weakness, dyspnoea, cough, breathlessness, loss of taste and various another symptom. Diagnosis is not only depended upon symptoms as they are not very specific for the particular disease and patient can be asymptomatic many times. So other investigating treatment should be done.

A case report has mentioned that after 4 negative nasopharyngeal swabs, PCR test came positive on 5th time, while CT scan showed abnormalities indicating COVID 19 infection. This emphasized the use of CT scan during diagnosis when PCR cannot detect the virus at early stages if necessary or is required. COVID 19 pregnant patients who further can develop cytokine storm syndrome are at very high risk of their foetal death. Severe sepsis can occur from bacterial community acquired pneumonia causing severe respiratory distress and sepsis may cause intrauterine infection leading to intrauterine death of foetus [6-13].

#### CONCLUSION

Infection of Hepatitis B with covid 19 while pregnancy is linked with more mother and foetal morbidity. Quick screening, seeing for complications, monitoring, and intervention are helpful in reduction of mother and foetal adverse effects, especially in high-risk pregnancy cases. Pregnancy gives a chance to physician to control or stop the disease progression and start healthy life.

Factors contributing to increased foetal loss.

Respiratory Causes: Pneumonia and respiratory distress syndrome.

Breast Milk Cause: Breast milk transmission.

Placental Cause: Placenta infiltration and thromboembolic complications.

Fetal Cause: Possibility of vertical transmission.

Cardiovascular Cause: Cardiac strain and endothelial dysfunction.

Coagulation Cause: Hypercoagulation, thrombi, emboli.

#### REFERENCES

1. <https://medicostimes.com/dc-duttas-obstetrics-pdf/>
2. Mertz D, Lo CK, Lytvyn L, et al. Pregnancy as a risk factor for severe influenza infection: An individual participant data meta-analysis. *BMC Infect Dis* 2019; 19:1.
3. Rasmussen SA, Jamieson DJ, Uyeki TM. Effects of influenza on pregnant women and infants. *Am J Obstetr Gynecol* 2012; 207:3-8.
4. Lei, R, Qiu, R. A strategy to prevent and control zoonoses?. *Hastings Cent Rep* 2020; 50:73.
5. Cross AR, Baldwin VM, Roy S, et al. Zoonoses under our noses. *Microbes Infection* 2019; 21:10-19.
6. [https://spiral.imperial.ac.uk/bitstream/10044/1/78197/9/uog.22027%4010.1002\\_%28ISSN%291469-0705.covid-19\\_in\\_obgyn.pdf](https://spiral.imperial.ac.uk/bitstream/10044/1/78197/9/uog.22027%4010.1002_%28ISSN%291469-0705.covid-19_in_obgyn.pdf)
7. Acharya S, Shukla S, Acharya N. Gospels of a pandemic-a metaphysical commentary on the current COVID-19 crisis. *J Clin Diagn Res* 2020; 14.
8. Arora D, Sharma M, Acharya S, et al. India in 'flattening the curve' of COVID-19 pandemic-triumphs and challenges thereof. *J Evol Med Dent Sci* 2020; 9:3252-355.
9. Bawiskar N, Andhale A, Hulkoti V, et al. Haematological manifestations of Covid-19 and emerging immunohaematological therapeutic strategies. *J Evol Med Dent Sci* 2020; 9:3489-3495.
10. Burhani TS, Naqvi WM. Telehealth--A boon in the time of COVID 19 outbreak. *J Evol Med Dent Sci* 2020; 9:2081-2085.
11. Butola LK, Ambad R, Kute PK, et al. The pandemic of 21st century-COVID-19. *J Evol Med Dent Sci* 2020; 9:2913-2918.
12. Dasari V, Dasari K. Nutraceuticals to support immunity: COVID-19 pandemic-A wake-up call. *J Clin Diagn Res* 2020; 14.
13. Gawai JP, Singh S, Taksande VD, et al. Critical review on impact of COVID 19 and mental health. *J Evol Med Dent Sci* 2020; 9:2158-163.