

Case Report

COVID-19 POSITIVE SYMPTOMATIC NEWBORN IN A LEVEL II NEWBORN CARE UNIT

Manjari Basu¹, Abhishek Saren², Subir Kumar Das^{3✉}

ABSTRACT

Puerperal acute inversion of uterus is a rare obstetric condition observed as a serious complication during the third stage of labor. The mechanisms are not completely known. However, extrinsic factors such as umbilical cord traction or abdominal expression are important factors. Here we report two cases of uterine inversion which presented to our facility; first was a case of subacute uterine inversion and the second was a case of acute uterine inversion.

KEY WORDS: COVID-19, newborn, critically ill.

INTRODUCTION

When the COVID-19 pandemic was first reported in a market place in Wuhan, China and spread throughout the globe,¹ paediatricians were grateful that children seemed to be only mildly symptomatic with the infection in most cases.² Children appear to have less severe pulmonary manifestations compared to adults, possibly due to lower gene expression of the angiotensin converting enzyme (ACE)-2 receptor (the target of SARS-CoV-2).^{3, 4} The disease trajectory in Paediatric patients has good prognosis compared to adults. Studies done so far revealed that vertical transmission of SARS-CoV-2 in neonates is yet to be determined, either by normal vaginal delivery or caesarean section.⁵ The clinical symptoms of neonates born to COVID19 positive mothers were variable and generally include fever, upper respiratory tract symptoms and gastrointestinal symptoms.⁵ Premature birth was also reported in 50% of the reported studies.⁵

We report here a COVID-19 positive newborn

with a stormy newborn period managed in level-II newborn care unit.⁶

THE CASE

A male newborn with birth weight 2.5 kg was admitted to Sick Newborn Care Unit of College of Medicine & JNM Hospital, WBUHS, Kalyani, Nadia, West Bengal, which is a level-II Newborn Care Unit on Day 4 of life with complaints of poor feeding and lethargy. The baby was delivered vaginal delivery and had an uneventful perinatal period. The baby was discharged with mother on day 2 of life from that hospital. On day 4 of life the baby refused to suck breast milk and was lethargic. Mother also developed fever on the same day. At the time of admission baby had hypoglycaemia with blood glucose level 18 mg/dl. After admission baby developed 2 episodes of convulsion. During convulsion blood glucose levels were more than 50mg/Dl. On next day mother's Rapid Antigen ICT for COVID-19 become positive and mother was transferred to Corona Designated Hospital

as she was symptomatic. On day 6, baby was tested for Rapid Antigen ICT for COVID-19 and report was positive. Few other family members were also become positive for Rapid Antigen test of Covid-19. From day 6, baby developed high grade fever with spike around 105F and hypoxia. His oxygen saturation was 84% to 88% in room air, though the baby has no signs of respiratory distress.

Baby's haemoglobin was 15.9 gm%, total WBC count 8,100/cmm with Neutrophil 60%, Lymphocyte 35%, Monocyte 3% and Eosinophils 2%, total platelet counts 1,30,000/cmm, Peripheral smear showed any Band cells or Toxic Granules. CRP was positive with value >1.2mg/dl, Procalcitonin level was >1.6ng/ml, serum sodium level was 134mEq/L, potassium level was normal, calcium level was normal, ferritin level was 650µg/Dl, Il-6 level was normal. Blood culture was negative. Chest X-Ray did not show any abnormality. CSF Study showed normal colour and pressure, no cell, mildly raised protein and normal sugar level. USG Brain and EEG showed no significant finding. Repeat Antigen test for COVID-19 after 7 days was also positive. Baby was managed with symptomatic management. On the day of admission Inj. Cefotaxime and Inj. Amikacine were started, hypoglycaemia was corrected, inj. Phenobarbitone was added for convulsion and later oxygen therapy was given for hypoxia. As mother and other care giver from family were admitted due to symptomatic COVID-19, baby was fed with artificial milk. Baby was kept single patient room. Baby was treated for 19 days in newborn care unit and discharged on day 23 of life. At the time of discharge baby's weight was 2.6kg. No medicine was given at discharge but baby was followed up at High-risk baby clinic.

DISCUSSION

Transmission of SARS-CoV-2 to newborn is thought to occur primarily through respiratory droplets during postnatal period when neonates are exposed to mothers or other care giver with COVID-19. Limited reports in the literature have raised concern of possible intrauterine, intrapartum or peripartum transmission, but the extent and clinical significance of vertical transmission, which appear to be rare, is

unclear.⁷ Our patient is symptomatic at day 4 of age and mother and other caregivers are positive of COVID-19, most possibly through post natal infection. One report mentioned 3 out of 33 newborns with positive nasopharyngeal and anal swabs on Day 2 and 4 of life.⁸ One of the largest cohort studies in US reported that newborn to SARS-CoV-2 positive mother did not develop symptoms of COVID-19.⁹ Few newborns may present with fever, sneezing, diarrhoea, vomiting and premature birth. But our patient is a term baby with adequate birth weight. He had two uncommon presentations - hypoglycaemia and convulsions. The convulsion was not due to sepsis or meningitis as sepsis screening, blood culture was negative and CSF Study showed only raised protein level. Convulsions were not due to hypoglycaemia as at the time of convulsion blood glucose levels were normal. He had also hypoxia which is also uncommon in newborns. He had no upper respiratory tract or G.I. symptoms. Among baseline laboratory findings there are mild decrease in platelet count and mild increase in CRP level. Following the guideline of management of SARS-CoV-2 positive newborn,¹⁰ we kept the patient in single patient room but negative room pressure was not available. Conclusion: COVID 19 in newborn though uncommon but it may affect vital organs. It may have impact on developing brain.

REFERENCES

1. Das SK, The pathophysiology, diagnosis and treatment of corona virus disease 2019 (COVID-19). *Indian J Clin Biochem* 2020; 35: 385-96.
2. Rowley AH. Understanding SARS-CoV-2-related multisystem inflammatory syndrome in children. *Nat Rev Immunol* 2020; 20(8): 453-54.
3. Rawat M, Chandrasekharan P, Hicar MD, Lakshminrusimha S. COVID-19 in newborns and infants-low risk of severe disease: silver lining or dark cloud? *Am J Perinatol* 2020; 37(8): 845-49.
4. Bunyavanich S, Do A, Vicencio A. Nasal gene expression of angiotensin-converting enzyme 2 in children and adults. *JAMA* 2020; 323(23): 2427-29.
5. Mustafa NM, Selim LA. Characterisation of COVID-19 pandemic in paediatric age group:

A systematic review and meta-analysis. J Clin Virol 2020;128:104395.

6. American Academy of Pediatrics Committee on Fetus and Newborn. Levels of neonatal care. Pediatrics 2012; 130(3): 587-97.

7. Evaluation and Management Considerations for Neonates At Risk for COVID-19. <https://www.cdc.gov/coronavirus/2019-ncov/hcp/caring-for-newborns.html> (accessed on October 11, 2020)

8. Zeng L, Xia S, Yuan W, Yan K, Xiao F, Shao J, 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(7):722-25.

9. Salvatore CM, Han JY, Acker KP, Tiwari P, Jin J, Brandler M, et al. Neonatal management and outcomes during the COVID-19 pandemic:

an observation cohort study. Lancet Child Adolesc Health 2020; 4(10):721-27.

10. Puopolo KM, Hudak ML, Kimberlin DW, Cummings J. Initial Guidance: Management of Infants born to Mothers with COVID-19. 2020 Apr 2.

<https://downloads.aap.org/AAP/PDF/COVID%2019%20Initial%20Newborn%20Guida...>

Accessed Apr 2, 2020.

Received: 28.12.2021

Accepted: 02.01.2022

Published: 31.01.2022

Citation: Basu M, Saren A, Das S K. COVID-19 positive symptomatic newborn in a level II newborn care unit. J Indian Acad Obstet Gynecol. 2021;3(1) ;49-51

1. Associate Professor, Department of Paediatrics,
2. Medical officer, Sick Newborn Care Unit,
3. Professor, Department of Biochemistry
College of Medicine and JNM Hospital, WBUHS, Kalyani,
Nadia 741235, West Bengal

e-mail: drsubirkdas@yahoo.co.in