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CORRESPONDENCE

Newborn with Nonimmune Hydrops Secondary to Fetal COVID-19 Myocarditis

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To the Editor: Newborns presenting with features of MIS-C as a complication of COVID-19, can be subgrouped as MIS-N (multisystem inflammatory syndrome in newborns). Transmission of maternal COVID-19 to fetus can lead to neonate presenting with inflammatory features [1, 2]. We report a preterm baby of COVID-19 mother with nonimmune hydrops.

Mother tested COVID-19 positive at 34 wk gestation, with no known comorbidities. Antenatal scans were normal in first and second trimesters. Obstetric scan revealed absent diastolic flow in umbilical arteries along with fetal right ventricular dilation, fluid collection in peritoneal, and bilateral pleural cavities suggestive of hydrops fetalis. Her pregnancy was terminated prematurely after 2 doses of dexamethasone.

Baby required intubation at birth (APGAR - 3/10, 5/10); extubated onto oxygen prongs by first hour of life. Persistent tachycardia, S3 gallop with hepatomegaly suggested cardiac overload; started on dobutamine infusion (10 mcg/kg/min) with frusemide (1 m/kg/dose q6h). Elevated CRP (14.29 mg/L) prompted initiation of antibiotics. Cardiomegaly on radiograph and abdominal free fluid on ultrasound were noted.

SARS-CoV-2 RT-PCR swabs sent on day 1, 5 were negative. Anti-COVID-19 antibodies were elevated (Total - 37.4 IU/L, IgG - 0.77 IU/L) implying COVID-19 infection in utero. 2D-echocardiography revealed pulmonary hypertension, biventricular hypertrophy, severe mitral and tricuspid regurgitation with EF = 35%. Ferritin (700 ng/mL) and LDH (2115.6 U/L) were also elevated. Baby improved by day 5, with EF = 58% and off oxygen support. She started accepting pallada feeds by day 7 and was discharged on day 17.

Amiraskari et al. and Krasniqi et al. have reported similar congenital myocarditis and nonimmune hydrops with maternal COVID-19, respectively [3, 4]. Early recognition and supportive care improves neonatal survival. Role of IVIG and steroids in MIS-N needs evaluation. This case highlights the possibility of congenital SARS-CoV-2 infection presenting as fetal hydrops.

Declarations

Consent for Publication Informed written consent was obtained from parents of the patient for publication of clinical data collected along with clinical photographs in medical journals. Consent forms are held with the institution.

Consent to Participate Informed written consent was obtained from parents of the patient for participation in the study.

Conflict of Interest None.

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