A rare gastrointestinal cause of non-immune hydrops fetalis: Meconium plug syndrome

Melekoglu NA, Melekoglu R, Keskin M
Gaziantep University, Gaziantep, Turkey

Objective

To describe a case of prenatally diagnosed non-immune hydrops fetalis caused by meconium plug syndrome.

Methods

The antenatal record of a case of prenatally diagnosed non-immune hydrops fetalis caused by meconium plug syndrome reviewed retrospectively.

Results

A 24-year-old woman, gravida 1 para 0, was admitted in the department of obstetrics and gynaecology at the 35th week of pregnancy for preterm labor. Her obstetric and medical history were unremarkable. Fetal ultrasonography scan revealed intrauterine growth retardation (estimated fetal weight < 5 percentile), polyhydramnios, pericardial effusion, and minimal ascites. There was absent end-diastolic flow in umbilical artery Doppler assessment. A male infant with APGAR 4/7, 1700 g, 47 cm was delivered by caesarean section. The neonate was transferred to the neonatal intensive care unit. There was severe generalized skin edema in the neonatal physical examination. Neonatal Echocardiography showed minimal pericardial effusion, tricuspid regurgitation, and pulmonary hypertension due to hydrops. The neonate required respiratory support by mechanical ventilation, and inotropic medication was started. Marked abdominal distension and delayed meconium passage was observed for 72 h in neonatal follow-up and the abdominal X-ray showed dilated bowel loops. At the end of the postnatal 3rd day, the neonate passed a meconium plug after rectal irrigation. Subsequently, the neonate was able to pass meconium with no requirement of additional intervention and the general clinical condition improved rapidly with tolerated extubation. However, he had one septic episode and had surgery because of testicular torsion. Other cardiac, infectious, metabolic or genetic conditions associated with non-immune hydrops fetalis were ruled out, and on the postnatal 33rd day, the neonate was discharged with healing.

Conclusion

Since the clinical condition of the patient had improved rapidly without additional intervention after meconium passage and the cause of NIHF cannot be explained for any other etiologic reason, meconium plug syndrome was thought to be responsible for NIHF. According to the literature, gastrointestinal causes of NIHF are very rare. Therefore meconium plug syndrome should be considered in patients with NIHF complicated with fetal bowel dilatation.