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Case Report

Necrotizing Enterocolitis: A Dreadful Condition of Premature Babies

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ABSTRACT

NEC is inflammatory necrosis of the intestine, with the most common sites in preterm babies being the terminal ileum and the ascending colon (1). The condition is typically seen in premature infants, and the timing of its onset is generally inversely proportional to the gestational age of the baby at birth; i.e. the earlier a baby is born, the longer the time of risk for NEC in premature babies. The incidence of NEC is inversely proportional to the gestational age and birth weight (2). The baby may have initial symptoms that include feeding intolerance, increased gastric residuals, abdominal distension, and bloody stools (3). The laboratory triad includes metabolic acidosis, hyponatremia, and thrombocytopenia. Pneumatosis intestinalis is the pathognomonic radiological finding in the NEC. Modified Bell's staging is used to stage the NEC. Treatment involves Nil per Oral, supportive care, antibiotics, surgery in advanced stages, and parenteral nutrition (4, 5). Complication of NEC includes mortality, prolonged NICU stay, intestinal strictures, enterocutaneous fistula, intra-abdominal abscess, cholestasis, and short-bowel syndrome, and neurodevelopmental, motor, sensory, and cognitive problems (6-9).

Keywords: Modified Bell's staging, Necrotizing Enterocolitis, Premature babies

Case

A follow-up case of a preterm female baby (28 weeks gestation) was admitted to our NICU at the age of two months with vomiting and feeding intolerance. The baby was born with a birth weight of 900 grams and was discharged from the NICU. On readmission, the baby had abdominal distension with an absence of bowel sounds. The baby was made NPO, and the necessary investigation was done. The baby had metabolic acidosis, hyponatremia, and thrombocytopenia with a high leukocyte count. An x-ray of the abdomen was done that showed pneumatosis intestinalis, portal vein gas, and bowel wall thickness (fig 1). The baby was labelled with Stage 2 B of NEC classification given by Bell. The baby was started with antibiotics, TPN, and supportive care. After 10 days of NPO, the baby was started on minimal enteral nutrition that was gradually increased. The rest of the nursery stay was uneventful, and the baby was discharged and now receives regular follow-ups.

Discussion

NEC is inflammatory necrosis of the intestine, with the most common site in preterm babies being the terminal ileum and the ascending colon (1). The condition is typically seen in premature

infants, and the timing of its onset is generally inversely proportional to the gestational age of the baby at birth; i.e. the earlier a baby is born, the longer the time of risk for NEC in premature babies. The incidence of NEC is inversely proportional to the gestational age and birth weight (2). Babies have initial symptoms that include feeding intolerance, increased gastric residuals, abdominal distension, and bloody stools (3). The laboratory triad includes metabolic acidosis, hyponatremia, and thrombocytopenia. Pneumatosis intestinalis is the pathognomonic radiological finding in the NEC. Modified Bell's staging is used to stage the NEC. Treatment involves Nil per Oral, supportive care, antibiotics, surgery in advanced stages, and parenteral nutrition (4,5). Complication of NEC includes mortality, prolonged NICU stay, intestinal strictures, enterocutaneous fistula, intra-abdominal abscess, cholestasis, short-bowel syndrome, and neurodevelopmental, motor, sensory, and cognitive problems (6,7,8,9).

Learning points/take home message

- Neonatologists must diagnose this condition in the initial stage, because higher stages are more related with mortality.

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Figure 1. X-ray of the infant with NEC. Image shows pneumatosis intestinalis, portal vein gases, and thickened bowel wall (NEC stage 2b)

- NEC can present itself at any age of the infant, and the condition must always be suspected whenever a premature baby has feeding intolerance.

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