

NECROTIZING ENTEROCOLITIS IN A NEWBORN PRETERM INFANT AND ROLE OF FEEDING: A CLINICAL CASE REPORT PRESENTATION

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Statement of the Problem: It's a clinical case presentation of a male preterm infant newborn, (+31 weeks) who was delivered in our hospital and transferred to our NICU because of prematurity, VLBW and need of respiratory support. Baby was detected with necrotizing enterocolitis (NEC) on 5th day of life, shortly after start of expressed milk feeding, which was detected early by the use of near infrared abdominal spectroscopy (NIRS). Baby was deteriorated clinically in a couple of hours and had intestinal perforation with peritonitis. So, abdominal exploration surgery with intestinal resection and end to end anastomosis was done urgently. Baby improved gradually and early feedings were started which were gradually increased up to full feedings with use of human fortified milk (HMF), probiotics and prebiotics.

Findings: The study stated the evidence-based feeding strategies guidelines for necrotizing enterocolitis (NEC) among very low birth weight infants and role of trophic feedings, probiotics, pre-biotics, micronutrients in prophylaxis, prevention and management of NEC.

Recommendations: Prematurity is the single greatest risk factor for NEC and avoidance of premature birth is the best way to prevent NEC. The role of feeding in the pathogenesis of NEC is uncertain, but it seems prudent to use breast milk (when available) and advance feedings slowly and cautiously. NEC is one of the leading causes of mortality and the most common reason for emergent GI surgery in newborns. NEC remains a major unsolved medical challenge, for which no specific therapy exists and its pathogenesis remains controversial. A better understanding of the pathophysiology will offer new and innovative therapeutic approaches and future studies should be focused on the roles of the epithelial barrier, innate immunity and microbiota in this disorder. Bioinformatics modeling is a new emerging strategy aimed at understanding the dynamics of various inflammatory markers and their application in early diagnosis and treatment.

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