Necrotizing Enterocolitis

Objectives

- Review the pathogenesis of NEC and its risk factors.
- Summarize the physiologic changes in neonatal sepsis and progression to shock.
- Apply current evidence practices to prevent NEC.
- Explain advances in predictive monitoring for neonatal sepsis.
- Discuss the immunologic aspects of the pathogenesis of NEC and its hematological manifestations.

Content Outline

1. Preventing NEC: Current evidence
   1.1 Epidemiology
   1.2 Pathogenesis and risk factors
   1.3 Feeds
      1.3.1 Breastmilk vs Formula
      1.3.2 Timing
      1.3.3 SIFT
   1.4 Immune-nutrition
      1.4.1 Probiotics
      1.4.2 Prebiotics
      1.4.3 Lactoferrin
   1.5 Other risks

2. Predictive monitoring for sepsis and NEC
   2.1 Conventional approach/Risk assessment
   2.2 Vital sign monitoring: Conventional/Complex
      2.2.1 HRC Index
         2.2.1.1 Case examples
      2.2.2 Respiratory analysis
   2.3 Alert systems

3. Immunologic and hematological abnormalities in NEC
   3.1 Immunologic aspects of NEC
      3.1.1 Mucosal sensitivity
      3.1.2 Intestinal epithelium, macrophages and dendritic cells
      3.1.3 Lymphoid tissue
      3.1.4 T lymphocytes
      3.1.5 B cells and Secretory immunoglobulins
      3.1.6 Platelet activating factor, Nitric Oxide, Growth Factor
      3.1.7 Cytokine responses
   3.2 Hematological manifestations of NEC
      3.2.1 Platelets
      3.2.2 Coagulopathy
      3.2.3 Anemia
      3.2.4 Neutrophils
      3.2.5 Macrophages and monocytes, eosinophils and basophils
      3.2.6 Lymphocytes, RBCs

Reading Material Resources listed next page
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Reading Material Resources

Module WB1742: Necrotizing Enterocolitis is based on the resources listed below. A copy of the resources are included with the module.

