Common and Not So Common Procedures Performed in Neonatology

Objectives

- Recognize the inherent risks associated with procedures and the importance of providing the highest level of procedural skill to avoid contributing to neonatal morbidity and mortality
- Describe the applications and benefits of point-of-care ultrasound (POCUS) use for procedural support in the setting of neonatal care
- Summarize the clinical indications and contraindications for use, necessary equipment, procedural techniques, post-procedural care, and the potential complications associated with umbilical vessel and peripherally inserted central catheter use, lumbar puncture, chest tube insertion, and pericardiocentesis or paracentesis
- Identify the indications and procedure for blood exchange transfusion
- Outline the purpose, timing and indications for follow-up related to screening for retinopathy of prematurity (ROP) and hearing screening in the NICU

Content Outline

1. Procedures Performed in Neonatology
   - 1.1 Overview of procedural skills in neonatology and use of point of care ultrasonography (POCUS)
   - 1.2 Umbilical vessel catherization indications, procedures for insertion, maintenance, and potential complications
   - 1.3 Indications for use of peripherally inserted central catheters including insertion process, maintenance, and potential complications
   - 1.4 Indications and contraindications for lumbar puncture in the NICU
     - 1.4.1 Variations in procedural approach and positioning
   - 1.5 Chest tube placement based on diagnosis and clinical indications
     - 1.5.1 Selection of catheter for insertion, placement location, management, and potential complications
   - 1.6 Current indications for exchange transfusion and potential complications
     - 1.6.1 Detailed description of the procedure and characteristics of the blood products to be used
   - 1.7 Screening procedures for retinopathy of prematurity (ROP) and hearing
   - 1.8 Diagnosis of effusions in the neonate and use of pericardiocentesis and paracentesis

Reading Material Resources

Module WB2735: Common and Not So Common Procedures Performed in Neonatology is based on the resource listed below. A copy of the resource is included with the module.

Appendix D Selected Procedures in Neonatology, RJ Rodriguez and MME Ruiz, in *Klaus and Fanaroff's Care of the High Risk Neonate, Eighth Edition*, Elsevier, 2026, 458-466.e1

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