

Let's Talk About Neonatal Ventilatory Support

Objectives

- Discuss the devices and methods that are available for providing non-invasive ventilatory support (NIV) for primary ventilatory support to avoid intubation and for secondary ventilatory support following extubation
- Outline the devices and methods for providing stabilization of the term and preterm newborn in the delivery room setting
- Match the non-invasive respiratory strategy most appropriate for the pathophysiology of specific neonatal lung disorders of the neonate
- Summarize the relationships between age at first extubation, extubation outcome, and death or respiratory morbidities as identified on subanalysis of a multicenter observational cohort study involving extremely preterm infants

Content Outline

1. An Evidence-based Update of Non-invasive Ventilatory Support in Neonates
 - 1.1 Overview of trends and rationale for transition to NIV
 - 1.2 Ventilatory approaches based on pathophysiology of neonatal lung disorders
 - 1.2.1 Nasal continuous positive airway pressure (nCPAP)
 - 1.2.2 Use of high-flow and low-flow nasal cannulas (HFNC) and (LFNC)
 - 1.2.3 Nasal(synchronized)intermittent positive pressure ventilation (s)NIPPV
 - 1.2.4 Bi-level positive airway pressure (BiPAP)
 - 1.2.5 Nasal high frequency oscillation ventilation (nHFOV)
 - 1.2.6 Nasal neurally adjusted ventilatory assist (NNAVA)
 - 1.3 Provision of non-invasive ventilatory support in the delivery room
 - 1.4 Conclusions and research suggestions
2. Relationships Related to First Extubation Attempt Timing in Extremely Preterm Infants
 - 2.1 Description of secondary analysis using a multicenter observational cohort study
 - 2.2 Results from secondary analysis involving 250 extremely preterm infants
 - 2.3 Recommendations to address limitations identified in the secondary cohort study

Reading Material Resources

Module WB2569: Let's Talk About Neonatal Ventilatory Support

is based on the resources listed below. A copy of each resource is included with the module.

Non-invasive ventilatory support in neonates: An evidence-based update, Mahmoud RA et al., *Paediatric Respiratory Reviews* 44 (2022), 11-18

Age at First Extubation Attempt and Death or Respiratory Morbidities in Extremely Preterm Infants, Shalish W et al., *The Journal of Pediatrics*, 252 (2023), 124-130