



Do Ventilated Neonates (Pre-Term and Term) in the Neonatal Intensive Care Unit (NICU) Benefit From Sedation and/or Analgesic Management or Is the Risk Too Great?

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Introduction

- Infants in the NICU, orally intubated, experience high amounts of stress and pain during mechanical ventilation.
- Sedation and analgesia can provide a wide range of benefits, but also can cause more harm than good.
- Nurses have difficulty balancing the use of enough sedation/analgesia to provide comfort and pain relief versus not using enough due to the potential negative effects.

Methods

- A literature search was conducted using the following search words:
 - “Sedation and Neonates”
 - “Ventilated neonates”
 - “Effects of Sedation in NICU”
- The following databases were searched:
 - CINAHL
 - Ebsco Host
 - DynaMed
- A total of five research articles were analyzed.

Results

- Data was founded that supported the use of sedation in the fragile neonates in the NICU. Benefits of sedation are:
 - ↓ time spent on the ventilator
 - ↓ risk of extubation
 - ↓ pain/agitation
- Data was also founded that contradicted the use of sedation and analgesia such as:
 - Tolerance/withdrawal from narcotics.
 - ↓ GI mobility leading to a longer time to reach full feeds
 - Adverse effects related to Versed and/or Fentanyl use
 - Bronchopulmonary dysplasia
 - Necrotizing enterocolitis
 - ↑ risk of developing a disability

Discussion

The majority of NICU staff use sedation based on patient need and physician preference. They lean more towards under sedation based on the data founded on the harmful effects of sedation. There is a fine line between under sedation and over sedation.

Scale for Possible Risks Associate With the Use of Sedation Among Neonates	
Risks or Concerns	Risk Assessment
Short-Term:	
Prolonged need for mechanical ventilation	++
Prolonged hospital stay	++
Medication tolerance	++
Withdrawal symptoms	++
Feeding intolerance	+
Intraventricular Hemorrhage and/or Periventricular Leukomalacia	+
Long-Term:	
Visual-Motor disturbances	-
Developmental delays	-
Later-on addiction	-
Autism and/or psychologic disturbances	-
Decreased IQ	-
+ indicates possible risk; ++, probable risk; -, risk was not studied	
Table retrieved from: Aly, H. (2004). Preemptive Strike in the War on Pain: Is it a Safe Strategy for Our Vulnerable Infants? <i>American Academy of Pediatrics</i> , 1335-1337. doi: 10.1542.	



Conclusions

- The findings of the research were contradictory in that sedation/analgesia has positive yet negative effects with no clear answer.
- Further research is needed to verify each side of the argument.
- The research states that sedation/analgesia, while it has many benefits, must be used with caution due to its potential for harmful effects.

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