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Emily Hudson

Cedarville University, ehudson@cedarville.edu

Ricky Voetberg

Cedarville University, rvoetberg@cedarville.edu

Stephanie Swanson

Cedarville University, sswanson@cedarville.edu

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Non-Pharmacological Pain Management Techniques in Neonates

Emily Hudson, Ricky Voetberg, Stephanie Swanson
Cedarville University School of Nursing

PATIENT CARE ISSUE

Background & Significance

- Research based evidence supports non-pharmacological techniques
- Hospitalized neonates undergo multiple painful procedures⁶
- Poorly treated pain leads to negative effects in neonates³
- Pharmacological techniques have many adverse effects³
- Benefits of non-pharmacological techniques include⁶
 - Few adverse effects
 - Easy to implement
 - Inexpensive
 - Effective

EVIDENCE-BASED PRACTICE QUESTION

Question: What is the most effective non-pharmacological technique for reducing procedural pain in neonates?

P- Hospitalized neonates

I- Non-Pharmacological pain management techniques

C- Facilitated tucking, breastfeeding, kangaroo care, non-nutritive sucking (NNS), sucrose

O- Effectively minimize pain in hospitalized neonates, using a non-pharmacological technique

REGISTERED NURSE INTERVIEW

- A NICU nurse at Dayton Children's Medical Center was interviewed about pain management
- Evidenced based policy guides pain management in neonates at Dayton Children's
- Non-pharmacological interventions implemented if pain score is greater than two
- Reassess in 30 minutes
- Avoid PRN meds

METHODS

- Key Words: "Non-pharmacological", "pain management", "neonates", and "NICU"
- Databases: MEDLINE, National Library of Medicine (PUBMED), and the Cumulative Index to Nursing and Allied Health Literature (CINAHL)
- Exclusion Criteria:
 - Infants older than 28 days
 - Chronic pain
 - Severe pain
- Inclusion criteria:
 - Acute procedural pain
 - Hospitalized
 - Neonates

RESULTS

- Fourteen of the sixteen articles recognized multiple intervention effectiveness
- One article reported sucrose to be more effective than facilitated tucking
- Three articles reported a combination of interventions as most effective
- One article reported NNS to be more effective than oral glucose
- Seven articles reported breastfeeding as the best intervention
- Five articles reported no hierarchy of interventions

SYNTHESIS OF EVIDENCE

Breastfeeding seems to be the best intervention⁵

Breastfeeding

- Integrates all individual interventions¹

If unavailable, interventions should be used in combination¹

Combination

- NNS and sucrose, skin-to-skin and dextrose, facilitated tucking and sucrose

Single interventions seem to be least effective²

Single Intervention

- Facilitated tucking, kangaroo care, NNS, sucrose

EVIDENCE-BASED PRACTICE RECOMMENDATIONS

- Routine non-pharmacological interventions should be implemented for painful procedures⁴
- If possible breastfeeding should be used as non-pharmacological intervention of choice
- If unavailable, a combination of interventions should be implemented
- Further research is needed using a consistent pain scale⁴

LIMITATIONS

- Various painful procedures used among observed studies
- Ethical considerations due to vulnerable population
- Extraneous variable of parental presence
- Inconsistent comparative pain scales

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