

Pain Management of Infants in NICU

Procedure Responsibilities and Authorisation

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| Department Responsible for Procedure | NICU |
| Document Owner Name | David Bouchier |
| Document Owner Title | Clinical Director NICU |
| Sponsor Title | Neonatologist NICU |
| Sponsor Name | Phil Weston |
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Procedure Review History

| Version | Updated by | Date Updated | Description of Changes |
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| 2 | David Bouchier | October 2016 | None |
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Pain Management of Infants in NICU

1. Overview

1.1 Purpose

Neonatal Intensive Care subjects the infant to repetitive painful procedures which have both short and long term adverse effects. The physiology, assessment tools and effects have been well reviewed (1,2,3). Multi-sensory stimulation (massage, eye contact, soothing/familiar voices and familiar smells) potentiate the effects of other analgesic agents (4).

The following guidelines are based on randomised, controlled trials (where available) as published (2,3). Note that repeated doses of sucrose (dextrose) analgesia in infants <31 weeks post-conception age may result in poorer neuro-behavioural development (11).

1.2 Procedure

1. Blood sampling:

a. Venepuncture

- Oral (not OG) 40% dextrose – 0.25–1mL, 2 min prior to procedure (10) (a pacifier has an additive effect) (16)
- Breast feed during procedure (5)
- EMLA cream 0.5g 60 min prior to procedure (7)

b. Heel lancing

- Oral 40% dextrose – 0.25-1mL 2 min prior to procedure (10)
- Breast feed (5)

NB EMLA cream is ineffective (7)

2. Intramuscular injection

- No firm evidence
- Consider oral 40% dextrose

3. OG/NG tube placement

- No firm evidence
- Consider oral 40% dextrose

4. Umbilical Line placement

- No firm evidence
- Consider oral 40% dextrose

5. Arterial puncture, percutaneous CVL or arterial line

- EMLA cream 0.5g 60 min prior to procedure (7)
- Oral 40% dextrose (10)
- Consider opioid if IV access available (for CVL or arterial line)

6. Arterial or venous cut-down

- EMLA cream 0.5g 60 min prior to procedures (7)
- Subcutaneous lignocaine
- Consider opioid if IV access available.

7. Lumbar puncture

- EMLA cream 0.5g 60 min prior to procedure (7)
- Oral 40% dextrose (10)

8. Endotracheal intubation (non-urgent)

- Atropine, Suxamethonium and opioid (12)

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9. Chest drain insertion

- Local infiltration with subcutaneous lignocaine
- Consider opioid if IV access available.

10. Endotracheal suction

- Oral 40% dextrose (10)
- Intravenous infusion of opioid

11. Ongoing analgesia for routine NICU care

- Reduce environmental stress (e.g. noise, teat etc)
- Swaddling
- Oral 40% dextrose with pacifier (if parents consent)
- Consider low dose opioid infusion (fentanyl is preferred if associated hypotension) (8, 9)
- Oral/rectal paracetamol use (there are no RCTs to support this recommendation).

2. Evidence Base

2.1 References

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