Non-drug management of procedural pain in babies

Introduction and background

Management of pain in infants remains less than optimal and there is research ongoing into methods of managing pain in neonates.

There are 2 approaches for the management of pain in infants - categorised as pharmacological (e.g. morphine, paracetamol) and non-pharmacological, and these can be used together for maximum efficacy. Infants should be frequently assessed for signs of pain and discomfort, such as grimacing, withdrawal, crying, breath holding etc.

Non-pharmacological methods include:

- Breast feeding
- Minimising environmental stimuli
- Soothing/stroking
- Containment holding
- Swaddling
- Non nutritive sucking
- Sucrose

The role of Sucrose is controversial. A recent Lancet paper from UCLH indicates that sucrose does reduce facial pain scores but does not reduce pain-specific brain activity. This means that whilst it may have a calming effect, it should not be considered to have the same efficacy as a “painkiller”. It is safe however, and can be used for both term and preterm infants.

Sucrose is particularly effective when combined with other non-pharmacological methods (see above).

The dose of sucrose is variable, and as it is a non-pharmacological intervention we have only suggested upper limits per dose. We expect staff to use it in small boluses to get a feel for the most effective doses, and these may then be incorporated into future guidelines

Indications for non-pharmacological pain management

Any uncomfortable or painful procedure, such as:

- Heel prick
- IV cannulation
- Venipuncture
- Long line insertion
- Lumbar puncture
- Immunization
- Arterial Stabs
- Eye examination
- Dressing changes
- Catheterisation
- Suprapubic urine collection
- Stoma bag changes
- CFM needle insertion

Use sucrose with caution in the following situation:

- Paralysed infants
- NEC
- Inability to swallow due to structural or neuromuscular problems
Neonatal Intensive Care Unit
Clinical Guideline

Dosage

Sucrose 24% solution in single-use containers.

Infant under 1000g - up to 0.5ml
Infants 1001 to 2000g - up to 1ml
Infants 2001 and over - up to 2ml

Dose can be repeated as necessary, all doses must be recorded.

Procedure

Consider if pharmacological control of pain might be most appropriate
If not:
Approximately 2 minutes before procedure:
  o Ensure comfortable position as possible
  o Swaddle if possible
  o Consider other non-pharmacological pain control techniques
  o Drop the appropriate amount of sucrose into the front of the babies mouth onto tip of tongue (NOT via the NGT)
  o Offer dummy if baby has one and parents have agreed
  o Further sucrose doses can be given during the procedure if necessary

Can be given by doctor or nurse
Document on feed chart, time and volume given

References
