Perinatal substance use: neonatal

45 minutes

Towards CPD Hours

References:

The Queensland Clinical Guideline: *Perinatal substance use: neonatal* is the primary reference for this package.

Recommended citation:

Queensland Clinical Guidelines. *Perinatal substance use: neonatal*: Clinical guideline education presentation E16.38-1-V2-R21. Queensland Health. 2016.

Disclaimer:

This presentation is an implementation tool and should be used in conjunction with the published guideline. This information does not supersede or replace the guideline. Consult the guideline for further information and references.

Feedback and contact details:

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Neonatal abstinence syndrome (NAS)

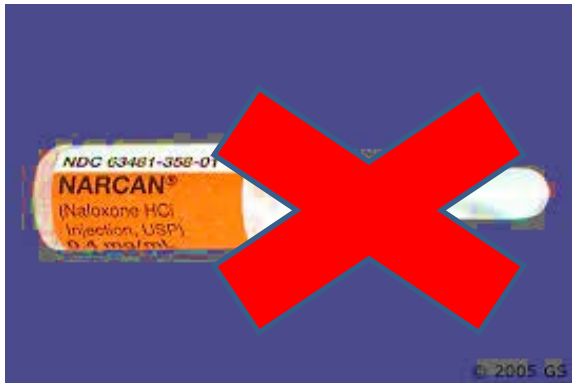
- Syndrome of drug withdrawal with non-specific signs in a baby following exposure to a variety of substances inutero

Neonatal withdrawal may be caused by inutero exposure to:

- Opioids
- Benzodiazepines,
- Selective Serotonin Reuptake Inhibitors (SSRIs)
- Alcohol and tobacco
- Amphetamines

Resuscitation

- Usual neonatal resuscitation as required
- Do not administer Naloxone
  - In the neonatal period if baby has had inutero exposure to opioids
  - May precipitate severe rapid onset of seizures



Symptomatic baby

- Clinical assessment and examination
- Review maternal history of licit/illicit substances
- Discuss substance use with woman
  - May be undisclosed
- Consider admission to special care nursery

Symptomatic baby

- Supportive care
- Postnatal observations
- Finnegan scores
  - Score the average of baby's behaviour since last scored

Clinical signs

- Suspect NAS if baby:
  - Unsettled
  - Irritable
  - Has high pitched cry
  - Jittery or has tremors
  - Does not feed well +/- diarrhoea
- Signs may be caused by concurrent illness

Onset of withdrawal

- Heroin: between 24 and 72 hours of age (may be earlier)
- Methadone/Buprenorphine: between 72 hours to 7 days
- SSRI: Day 2 up to day 5–7

Differential diagnosis

- Infection
- Hypoglycaemia
- Hypocalcaemia
- Metabolic disorders

Clinical examination

- Conduct a full examination
- Consider concurrent illness
- Review risk factors for neonatal sepsis
- Investigate to exclude infection or metabolic disturbance
- Treat any identified illness

Preterm babies

- Less severe NAS related to:
  - Developmental immaturity of specific opiate receptors/neurotransmitter function
  - Reduced exposure time
  - Reduced fatty deposits of drugs

Inter-hospital transfer

- If appropriate, transfer the antenatal woman to a higher level facility *or*
- If required, transfer woman and baby after birth to higher level facility

Management of substance withdrawal

- Use non-pharmacological management as first line treatment
- Use pharmacological treatment if withdrawal not adequately controlled

Supportive/non-pharmacological care

- Support rooming-in
- Minimise hunger—encourage breastfeeding
- Early response to baby cues
- Decrease environmental stimuli (e.g. light and sound)
- Cluster care—avoid over-stimulation

Feeding

- Individual risk-benefit analysis
- Breastfeeding not recommended if:
  - HIV positive
  - Using, alcohol, amphetamines, heroin, cocaine
- Encourage/support breastfeeding where possible
- Develop feeding safety plan woman

Breast milk

- Analgesic for baby
- Soothes agitated baby
- Helps meet higher caloric requirements
- Helps reduce stress response and increased vagal tone in woman

Formula feeding

- May be primary source of nutrition
- Usual education re:
  - Preparation,
  - Storage,
  - Equipment cleaning
  - Transport

Finnegan tool

- Most widely used assessment of opioid withdrawal in term babies
- May be used to aid assessment of other substance withdrawal
- Requires staff training and auditing to ensure reliability and scoring consistency
- Ensure inter- and intra- observer validation of scoring

Finnegan scoring

- Start within 2 hours of birth
- Score 4–6 hourly 30–60 minutes after feeds
- Assign only one score for each sign in each of the three sections
- Score reflects behaviour since previous assessment
- Do not disturb baby to assess signs
- Make allowances if baby preterm

Finnegan Score

SYSTEM	SIGN	SCORE						
Central nervous system disturbances	Excessive high pitched cry	2						
	Continuous high pitched cry	3						
	Sleeps < 1 hour after feeding	3						
	Sleeps < 2 hours after feeding	2						
	Sleeps < 3 hours after feeding	1						
	Hyperactive Moro reflex	2						
	Markedly hyperactive Moro reflex	3						
	Mild tremors disturbed	1						
	Moderate–severe tremors disturbed	2						
	Mild tremors undisturbed	3						
	Moderate–severe tremors undisturbed	4						
	Increased muscle tone	2						
	Excoriation	1						
	Myoclonic jerks	3						
	Generalised convulsions	5						
Gastrointestinal disturbances	Excessive sucking	1						
	Poor feeding	2						
	Regurgitation	2						
	Projectile vomiting	3						
	Loose stools	2						
	Watery stools	3						
Respiratory/vasomotor disturbances	Sweating	1						
	Fever 37.3 to 38.3 °C	1						
	Fever 38.4 °C and above	2						
	Frequent yawning > 3–4 in half hour	1						
	Mottling	1						
	Nasal stuffiness	1						
	Sneezing > 3–4 in half hour	1						
	Nasal flaring	2						
	Respiratory rate > 60/minute	1						
	Respiratory rate > 60/minute and retractions	2						
	TOTAL SCORE							
	SCORER'S INITIALS							

Scoring

2 consecutive scores ≥ 12

OR

3 consecutive scores average ≥ 8

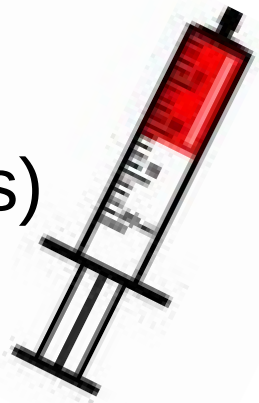
Admit to SCN
and
Commence pharmacotherapy

Morphine

- Opiate of choice
- Less likely to have seizures
- Less likely to require treatment with second line agent
- Duration of treatment may be less

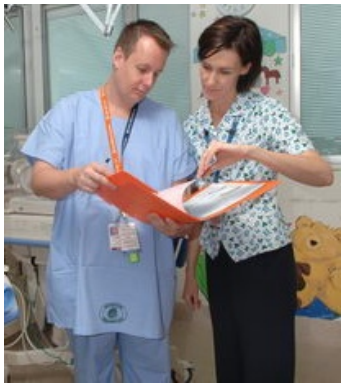
Phenobarbitone

- Use as an adjunct to Morphine when NAS not controlled
- Initial treatment where substance/s used by woman:
  - Unknown or polysubstance
  - Alcohol (intoxication at birth)
  - SSRI or sedatives (Benzodiazepines)



Paediatric review

- Early and daily consultation
- When showing signs of NAS
- If commencing Morphine or Phenobarbitone
- When receiving maximum dose of medication
- Exclusion of other causes not possible



Discharge planning

- Assess for safe discharge of baby
- Minimum 5 days in hospital for opioid withdrawing baby
- Minimum 3 days in hospital for SSRI exposed baby

Discharge plan

- Feeding plan
- Home medication if appropriate
- Child safety plan
- Parent education
- Immunisations
- Community referrals & paediatric follow up

Contraindications to discharge

- Court order
- Excessive weight loss
- Less than 5 days old if opioid exposure
- Suspected neglect or abuse
- Suspected home violence
- Ongoing assessment of withdrawal

Relative contraindications to discharge

- Woman has limited ability to care for baby
- Inadequate home support/refusal to accept help
- Problematic drug or polysubstance use
- Erratic behaviour/mental health issues/psychological distress

Child protection issues

- Increased risk of:
  - Poor health and wellbeing outcomes
  - Exposure to maternal high risk behaviours
  - Being subjected to social issues
- Not all babies have involvement of child protection services

Child safety

- Raise concerns if:
  - Continued IV or other illicit drug use
  - Suspected baby neglect
  - Domestic violence
  - Non-compliance with management
  - Other issues identified

Immunisation

If woman is:

Hepatitis B surface antigen (HBsAg) positive

OR

Hepatitis B status unknown and urgent serology not available

Administer to baby:

Hepatitis B immunoglobulin within 12 hours of birth
and
Hepatitis B vaccination within 24 hours of birth