

Neonatal Medication Guideline

Clinical Guideline

Suxamethonium

Policy developed by: SA Maternal, Neonatal & Gynaecology Community of Practice

Approved SA Health Safety & Quality Strategic Governance Committee on: 9 November 2017

Next review due: 9 November 2020

Summary The purpose of this guideline is to guide nursing, medical and pharmacy staff in the dosing and administration of suxamethonium

Keywords Suxamethonium, neonatal medication guidelines, succinylcholine chloride, intubation, succinylcholine, muscle relaxant, vecuronium, pancuronium, malignant hyperthermia, hyperkalemia, bradycardia, atropine, neuromuscular

Policy history Is this a new policy? **N**
Does this policy amend or update an existing policy? **Y v2.0**
Does this policy replace an existing policy? **N**
If so, which policies?

Applies to All SA Health Portfolio
All Department for Health and Ageing Divisions
All Health Networks
CALHN, SALHN, NALHN, CHSALHN, WCHN, SAAS

Staff impact All Clinical, Medical, Midwifery, Nursing, Students, Allied Health, Emergency, Mental Health, Pathology, Pharmacy

PDS reference CG059

Version control and change history

Version	Date from	Date to	Amendment
1.0	November 2012	May 2017	Original version
2.0	May 2017	November 2017	Full review
3.0	9 November 2017	Current	Addition of pre-filled syringes

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suxamethonium

100mg/2mL injection, 5mg/mL pre-filled syringe

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Note

This guideline provides advice of a general nature. This statewide guideline has been prepared to promote and facilitate standardisation and consistency of practice, using a multidisciplinary approach. The guideline is based on a review of published evidence and expert opinion.

Information in this statewide guideline is current at the time of publication.

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Health practitioners in the South Australian public health sector are expected to review specific details of each patient and professionally assess the applicability of the relevant guideline to that clinical situation.

If for good clinical reasons, a decision is made to depart from the guideline, the responsible clinician must document in the patient's medical record, the decision made, by whom, and detailed reasons for the departure from the guideline.

This statewide guideline does not address all the elements of clinical practice and assumes that the individual clinicians are responsible for discussing care with consumers in an environment that is culturally appropriate and which enables respectful confidential discussion. This includes:

- The use of interpreter services where necessary,
- Advising consumers of their choice and ensuring informed consent is obtained,
- Providing care within scope of practice, meeting all legislative requirements and maintaining standards of professional conduct, and
- Documenting all care in accordance with mandatory and local requirements

This is a High Risk Medication

Only muscle-relax a neonate if confident that the airway can be maintained and that hand ventilation can be provided.

Suxamethonium and pancuronium look similar. Suxamethonium can be kept out of the fridge and thus separating both medications to eliminate confusion.

If a neuromuscular abnormality of any kind is suspected suxamethonium should not be used (see contraindications)

Synonyms

Succinylcholine chloride, succinylcholine

Dose and Indications

Intubation (Depolarising Muscle Relaxant)

Intravenous

2mg/kg/dose, repeated when required

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South Australian Maternal, Neonatal & Gynaecology Community of Practice

9/11/17

South Australian Neonatal Medication Guidelines Workgroup at:

Health.NeoMed@sa.gov.au



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Preparation and Administration**Intravenous****Suxamethonium 5mg/ml prefilled syringe******Dilution instructions to make Suxamethonium 5mg/ml (if pre-filled syringe unavailable)**

Dilute 1mL of suxamethonium (100mg/2mL) with 9mL sodium chloride 0.9% (to a total volume of 10mL), shake vigorously to dissolve. The solution contains 5mg/mL suxamethonium.

Dose	1mg	2mg	3mg	4mg	5mg	6mg
Volume	0.2mL	0.4mL	0.6mL	0.8mL	1mL	1.2mL

Administer over 10 to 30 seconds.

Compatible Fluids

Glucose 5%, glucose/sodium chloride combinations and sodium chloride 0.9%

Adverse Effects**Common**

Muscle twitching, bradycardias (particularly with repeated dosing), excessive salivation, increased intraocular, intracranial and intragastric pressures.

Infrequent

Tachycardia, arrhythmias, hypertension, hypotension, bronchospasm, jaw rigidity, prolonged neuromuscular blockade and hyperkalaemia.

Rare

Malignant hyperthermia¹, myoglobinaemia, rhabdomyolysis

¹**Malignant hyperthermia** is a rare hypermetabolic response of skeletal muscle, triggered by certain drugs resulting in increased O₂ consumption and CO₂ production, tachypnoea, tachycardia, arrhythmias, muscle rigidity, rising temperature and metabolic acidosis.

Monitoring

- > Cardiorespiratory and pulse oximetry monitoring are mandatory. Close monitoring of blood pressure (invasive or non-invasive) is recommended.

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Contraindications/ Precautions

- > Contraindicated:
 - Severe hyperkalemia
 - In suspected muscular dystrophies, congenital myopathies or neurological disease involving extensive muscle wasting;
 - Where there is a personal or family history of malignant hyperthermia;
 - After the acute phase of injury following major burns, multiple trauma or spinal injury, severe metabolic acidosis with hypovolaemia, and prolonged use of non-depolarising muscle relaxants due to the risk of suxamethonium-induced hyperkalaemia and cardiac arrest
- > Use with caution in conditions such as electrolyte imbalance, severe sepsis, uraemia, burns

Practice Points

- > May cause reactive bradycardia and increased salivation, however this is uncommon with single doses
- > Atropine should be available and may be used prior to suxamethonium for intubation to reduce any reactive bradycardia and increased salivation
- > Dose may need to be reduced if used with other anaesthetic or neuromuscular blocking drugs.
- > Muscle relaxants do nothing to reduce pain and distress.

Version control and change history**PDS reference:** OCE use only

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