South Australian Neonatal Medication Guidelines

Rocuronium

50mg/5mL injection

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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 hand ventilation can be provided.

Dose and Indications

Rocuronium bromide

Dose and Indications

For muscle paralysis in ventilated babies and for intubation

Intravenous

0.5mg/kg as a bolus

The dose may be repeated every 1 to 2 hours or as needed for paralysis

Preparation and Administration

Intravenous

Dilute 0.5mL (5mg) of rocuronium 10mg/1mL with 0.9% sodium chloride to a total volume of 5mL. The resulting solution contain 1mg/mL rocuronium

Dose	0.25mg	0.5mg	0.75mg	1mg	1.25mg	1.5mg	1.75mg	2mg
Volume	0.25mL	0.5mL	0.75mL	1mL	1.25mL	1.5mL	1.75mL	2mL

Administer as a push over 5 to 10 seconds

Administration line should be adequately flushed to avoid unintended paralysis during recovery

Rocuronium

50mg/5mL injection

Compatible Fluids

0.9% sodium chloride, glucose 5%, compound sodium lactate (Hartmann's solution)

Adverse Effects

Common

Prolonged paralysis

Note: Hypoxaemia may occur because of inadequate mechanical ventilation and deterioration in pulmonary mechanics

Infrequent

Bronchospasm, tachycardia, hypertension, transient hypotension

Rare

Anaphylactic reactions

Monitoring

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

Practice Points

- Rocuronium has a similar time to onset of action to suxamethonium, but a longer duration of action.
- Time to onset of action usually within 1 minute. Duration of action is dose dependent and may range from approximately 30 to 60mins.
- Factors that may prolong neuromuscular blockade:
  - increased doses of rocuronium
  - some antibiotics (aminoglycosides, vancomycin), other muscle relaxants, thiopental, diuretics
  - acidosis, hypothermia, electrolyte abnormalities (e.g. severe hypocalcaemia, hypokalaemia, hypermagnesemia), neuromuscular disease and hepatic impairment
- Factors that may reduce neuromuscular blockade:
  - Alkalosis, hyperkalaemia, hypercalcaemia
  - Anti-epileptics (phenytoin, phenobarbitone)
- Phenytoin may diminish neuromuscular blockade
- Do not mix with any other medications
- Provide eye protection and instil lubricating eye drops every 2 hours
- Use cautiously in neonates with hepatic or renal impairment and in neonates with fluid and electrolyte imbalance

References

> Feltman DM, Weiss MG, Nicoski P, Sinacorse J, Rocuronium for nonemergent intubation of term and preterm infant, 2011, Journal of Perinatology, vol 31, pages 38-43

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