Indometacin for neonates

BRIEF ADMINISTRATION GUIDE

For detailed information refer to The Australasian Neonatal Medicines Formulary (ANMF) **Indometacin** guideline

Note: Shaded text indicates where Te Whatu Ora Waikato practice differs from ANMF

Note: indometacin = indomethacin

1. Medicine

1.1. Indications

Closure of patent ductus arteriosus (PDA)

- refer to the NICU PDA guideline #6488

1.2. Route and Presentation

Intravenous

- Supplied as indometacin 1 mg vial (powder for reconstitution)
  An unapproved medicine, available under Section 29 of the Medicines Act

1.3. Dose

Single daily dose as follows:

Post-natal Age	Day 1	Day 2	Day 3
< 48 hours	**200** microgram/kg/dose	**100** microgram/kg/dose	**100** microgram/kg/dose
≥ 48 hours	**200** microgram/kg/dose	**200** microgram/kg/dose	**200** microgram/kg/dose

Further doses may only be given on the advice of a Cardiologist if a haemodynamically significant PDA remains on re-evaluation following a primary course of PDA treatment.

2. Preparation and Administration

2.1. Compatible fluids

Sodium chloride 0.9%, water for injection

2.2. Administration Method

Intermittent IV Infusion

- Reconstitute each vial with 2 mL of compatible fluid to produce a **500 microgram/ml** solution
- Administer by intravenous infusion **over 20 to 30 minutes** via a Guardrails profiled syringe driver

2.3. Monitoring

- Urine output and report if <1 ml/kg/hour to doctor or NNP
- Daily renal function, serum electrolytes, glucose, and platelet counts
- Blood pressure and heart rate at least every 4 hours
- Observe for signs of bleeding or serious adverse reactions
- Assess for ductal closure
- Observe IV site for irritation or extravasation

2.4. Storage and Stability

- Store vials at room temperature (below 25° C) and protect from light
- Discard any remaining solution in the vial

2.5. Competency for Administration

This procedure is carried out by, or under, the direct supervision of a registered nurse/registered midwife who holds current Te Whatu Ora Waikato Generic Medicine Management and IV certification plus Guardrails competency (if administering IV) as well as Neonatal specific competency NCV/NAC (if administering via CVAD).

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2.6. Guardrails

Indometacin is Guardrail profiled on the CC syringe driver for NICU. Following are the guardrail limits:

Guardrails Drug Name	Indometacin*
Concentration (mcg/mL)	
Minimum	100
Maximum	1000
Dose rate (mcg/kg/h)	
Default	400
Soft minimum	398
Soft maximum	600
Hard max	602

3. Associated Documents

- Management of the Haemodynamically Significant Patent Ductus Arteriosus, Waikato NICU guideline #6488

4. References

- Australian Neonatal Medicines Formulary. Indometacin Drug Guideline. 2021. Available from: www.anmfonline.org/wp-content/uploads/2022/06/Indometacin_ANMFv3.0_20210923.pdf
- New Zealand Formulary for Children (NZFC) v118. Indometacin. Accessed 16th February 2022. Available from: https://www.nzfchildren.org.nz/nzf_5530
- Truven Health Analytics Inc. Neofax® Indomethacin monograph. Accessed 16th February 2022. Available from: http://www.micromedexsolutions.com.
- Phelps SJ, Hagemann TM, Lee KR, Thompson AJ. The Teddy Bear Book: Pediatric Injectable Drugs. 10th edition. American Society of Health-System Pharmacists; 2013.
- Samarth Ltd. Indomethacin for Injection (Ductaclose®) Data Sheet (package insert).
- The Royal Children's Hospital Melbourne. Paediatric Injectable Guidelines. Accessed 16th February 2022. Available from: https://pig.rch.org.au.
- Auckland DHB Newborn Services. Indomethacin Drug Protocol. September 2007. Available from: https://starship.org.nz/guidelines/indomethacin/
- Canterbury DHB Neonatal Services. Indomethacin Drug Information Sheet. October 2012. Available from: http://www.cdhb.health.nz/Hospitals-Services/Health-Professionals/Neonatal-Clinical-Resources/Neonatal-Drug-Information-Sheets.

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