

Intravenous Immunoglobulin in Neonates in Newborn Intensive Care Unit (NICU)

Guideline Responsibilities and Authorisation

Department Responsible for Guideline	NICU
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Target Audience	Registered Nurses, Nurse Practitioners, Clinical Nurse Specialists, Registrars, Senior Medical Officers
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Guideline Review History

Version	Updated by	Date Updated	Summary of Changes
2	Joyce Mok	Jun 2015	3 yearly update
3	Joyce Mok	Mar 2016	Include changes according to NZ Blood Service on use of immunoglobulin
4	Joyce Mok & Jutta van den Boom	Nov 2019	Due for review

Intravenous Immunoglobulin in Neonates in Newborn Intensive Care Unit (NICU)

1 Overview

1.1 Purpose

To outline the guideline for the use of intravenous immunoglobulin in the Newborn Intensive Care Unit (NICU).

1.2 Scope

Waikato District Health Board (DHB) staff working in NICU.

1.3 Patient group

Babies and infants in NICU.

1.4 Contraindications

- Parental/cultural/religious reasons
- Previous serious reaction to immunoglobulins

1.5 Definitions

IVIG	Intravenous Immunoglobulin (Intragam® P)
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2 Clinical Management

2.1 Guideline

Dose

Intragam® P 0.5g – 1g/kg/dose (may be repeated after 24 hours)

Route

IV, undiluted over 4-6 hours (faster rate at discretion of consultant).

ABO

Compatibility is not relevant for manufactured (fractionated) plasma product transfusion.

Incompatibilities

- Do not infuse with any other IV medication.
- Do not add medications to blood products.

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Prescription:

- IVIG must be prescribed on the medication chart.

Note:

Approval of first time recipient for intravenous immunoglobulin (Intragam® P) is required. Approval is obtained via the electronic approval system called [iGo](#). This can be accessed via either the [Everything Blood Site](#) on the Intranet or through the following link (<https://igo.nzblood.co.nz>).

- Users need to be first registered on the system. Consultants and registrars can register and will be able to submit approval requests. A registrar can only do this if the responsible consultant is already registered.
- If urgent, please contact the Transfusion Medical Specialist on call.

Consent

Parental consent is required.

Special precautions

- Use in one patient on one occasion only.
- If Intragam® P appears to be turbid or to contain any sediment, it must not be used. The unopened bottle should be returned to the New Zealand Blood Service.
- Intragam® P should be administered separately from other intravenous fluids or medications the patient might be receiving.

Monitoring

According to Waikato DHB nursing procedure (4822) and medical procedure (1645) for blood transfusions

Storage

If there is a delay, return to Blood Bank, or store at 2-8°C in a blood bank approved vaccine or blood refrigerator. Do not refrigerate after the bottles have reached room temperature.

Infusion

- Do not use IV filter: bypass or remove baby's IV filter before administration.
- A blood filter is not needed.
- Infuse once the bottle has reached room temperature.
- Always observe for turbidity, floating material and sediment.
- Do not shake bottles (this causes frothing).
- Use a vented infusion set or a standard infusion set with a venting spike. Spike the bottle stopper in the centre to minimise stopper dislodgement.

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- Blood product must be used within 30 minutes from leaving Blood Bank and if not used, return to Blood Bank promptly.
- Intragam® P may be administered through any standard IV infusion giving method in NICU, e.g. syringe and tubings.

Procedure for infusion:

1. Allow the preparation to reach room temperature before use.
2. Remove the plastic cover from the seal.
3. Apply a suitable antiseptic to the exposed part of the rubber stopper and allow to dry.
4. Stand the bottle upright and insert the air vent needle vertically in one of the indentations of the stopper. It is preferable to use a long airway needle fitted with a filter. If not available, a short needle attached to a non-wettable filter may be used.
5. Insert a drawing needle (connected to the correct size syringe) through another indentation of the stopper and draw up the prescribed amount. Should the stopper become dislodged, do not use this bottle and discard the solution appropriately.
6. Keep the bottle by baby's bedside until the end of the infusion (for return to Blood Bank).
7. Prime the tubing and set up the infusion as per Waikato DHB NICU Nursing Procedure: *Blood transfusions by aliquots or infusion - Nursing Management (4822)*.

2.2 Special warning and precautions for use

- Intragam® P should only be administered intravenously.
- Intragam® P contains trace amounts of IgA which may provoke anaphylaxis in patients with IgA antibodies, such as those with IgA deficiency.

2.3 After care

- Dispose used equipment into designated containers
- Return the used bottle to Blood Bank

3 Patient information

Give parents NZ Blood pamphlets: "Immunoglobulin Products, Intragam P, Privigen and Evogam".

4 Complications

- A detailed description of adverse effects is found in the medsafe datasheet which can be viewed online. <https://www.medsafe.govt.nz/profs/datasheet/i/IntragamPinj.pdf>
- Overdosage may lead to fluid overload and hyperviscosity

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5 Adverse reactions:

- No adverse effects reported in neonates.
- In adults and children: hypotension, anaphylaxis, dyspnoea, flushing, hives, headache, vomiting, aseptic meningitis, abdominal pain, haemolysis, renal dysfunction, infection.

6 Audit

6.1 Indicators

- The recommended dose of immunoglobulin is accurately calculated and prescribed
- Physiological monitoring aligns with Waikato DHB nursing and medical procedures for blood transfusions.
- Consent is obtained and documented prior to the administration of immunoglobulin

7 Evidence base

7.1 References

- Auckland DHB (2018). Blood products - immunoglobulin IVIG (Newborn Services). Retrieved Nov 1, 2019 from <https://www.starship.org.nz/guidelines/blood-products-immunoglobulin-ivig-newborn-services/>
- Starship (2015) Intravenous Immunoglobulin (IVIG) therapy. Starship Clinical Guidelines retrieved November 1, 2019 from <https://www.starship.org.nz/guidelines/intravenous-immunoglobulin-ivig-therapy/>.
- Medsafe (2018). Intragam P 6% solution for infusion. *New Zealand Data Sheet*. Retrieved on Nov 1, 2019 from <http://www.medsafe.govt.nz/profs/datasheet/i/IntragamPini.pdf>

7.2 Associated Waikato DHB Documents

- Waikato DHB (2013). Everything Blood procedures [Intravenous Immunoglobulin – IVIg \(approval for prescribing guidelines\)](#). Retrieved June 9, 2016 from
- Waikato DHB (2014). Everything Blood: How to give blood – Info & quick guides on giving blood products: [How to administer Intragam P \(Intravenous Immunoglobulin\) – Quick guide](#). Retrieved Oct 15, 2019 from
- Waikato DHB NICU Medical Procedure: [Blood transfusion: Threshold for top up in Newborn Intensive Care Unit](#) (1645)
- Waikato DHB NICU Nursing Procedure: [Blood transfusions by aliquots or infusion - Nursing Management in Newborn Intensive Care Unit](#) (4822)

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