



## NCCU CLINICAL GUIDELINES

### SECTION: 10

## METABOLIC MANAGEMENT

Section: 10 Metabolic Management  
Immunoglobulin infusion (IVIg) in isoimmune haemolytic jaundice  
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Neonatology Clinical Guidelines  
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## IMMUNOGLOBULIN INFUSION (IVIg) IN ISOIMMUNE HAEMOLYTIC JAUNDICE

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IVIg has been shown to reduce the need for exchange transfusion (ET) in Rhesus and ABO haemolytic disease. IVIg should be considered when the total serum bilirubin levels is 35 to 50 micromol/L, below ET level or continuing to rise at 8-17 micromol/L/ hour despite intensive phototherapy.

IVIg may also decrease the mean number of ETs per infant, decrease the duration of phototherapy and hospital stay but does not always prevent the need for ET.

Efficacy of IVIg is not conclusive in Rh haemolytic disease of the newborn, the studies with low risk of bias indicating no benefit and studies with high risk of bias suggesting benefit. Role of IVIg in ABO disease is not clear as studies that showed a benefit had high risk of bias.

### INDICATION

- Rh and ABO incompatibility.
- Not indicated unless Direct Antibody Test (DAT) is positive
- Other isoimmune haemolytic disease (no systematic reviews available)
- Difficulties in obtaining appropriate blood for ET or parental refusal for ET.
- Do not give if exchange transfusion imminent.

### MECHANISM OF ACTION

Thought to act by blocking the Fc receptors in reticuloendothelial system thus preventing them from taking up and lysing antibody coated RBCs. May also increase rate of IgG catabolism and decrease circulating autoantibody.

### SIDE EFFECTS

Possible side effects are similar to blood transfusions. Fever, allergic reactions, haemolysis, fluid overload, anaphylaxis (reported in IgA deficiency) and possible disease transmission. Systematic reviews did not reveal any adverse reactions in neonates receiving IVIg.

### DOSE & ADMINISTRATION

**INTRAGAM P** (Immunoglobulin IgG) from pooled human plasma. 3g in 50ml vial.

- 0.5g to 1gm/kg. Intravenous infusion over 4 hours. Can be repeated in 12 hours.

[See Intragam P \(3G and 12G\) Plasma Derived Blood Components. Transfusion Medicine Protocols](#)

Should be used only at consultant's advice and ordered on a named patient basis only and is supplied by ARCBS on approval by their Haematologist. Parents are to be notified before administration.

***Note: the dose of Intragam P is not clearly defined and the drug is expensive and in short supply. Dosages should be rounded down to whole vials and we should not require more than 1 x 50ml vial (3g) per dose. Intragam is administered through a standard IV infusion set. An in line 170-200 micron filter is NOT required.***

## REFERENCES

Gottstein R& Cook R: Systematic review of IVIG in HDN: Arch.dis.child.Fetal Neonatal Ed, 2003,88:F6-10.

Louis D, More K, Oberoi S, Shah PS. Intravenous immunoglobulin in isoimmune haemolytic disease of newborn: an updated systematic review and meta-analysis. Arch Dis Child Fetal Neonatal Ed. 2014 Feb 10. doi: 10.1136/archdischild-2013-304878.