

#### PURPOSE

To facilitate the safe delivery of Intravenous immunoglobulin to patients of Barwon Health.

#### POLICY

To correctly identify patient's who require Intravenous immunoglobulin product prior to administration  
To safely administer Intravenous immunoglobulin, including product description and indications.

#### SCOPE

This policy and procedure applies to Division 1 Nursing staff, and Medical officers.

#### PROCEDURE

##### Issue

All **intravenous immunoglobulin infusions** are available through **PathCare blood bank laboratory**, which holds a small stock. Intravenous immunoglobulin **requires authorization by the duty medical officer of the Australian Red Cross Blood Service (ARCBS)**. The treating clinician should arrange this.

##### Product Description

**Octagam® is manufactured by Octapharma in Europe.** Octagam contains Human normal immunoglobulin G (IgG) > 95%, with a broad spectrum of antibodies against infectious agents. The Immunoglobulin A (IgA) content is < 100microgram/ml. Manufacturing process includes two viral inactivation steps, solvent /detergent treatment followed by an incubation step.

##### Indications

**It is approved for use in Australia for the following indications:**

1. **Primary Immune Deficiency Syndromes**
2. **Myeloma or chronic lymphocytic leukaemia with severe secondary hypogammaglobulinaemia and recurrent infections**
3. **Children with congenital Acquired Immune Deficiency syndrome (AIDS) who have repeated bacterial infections**
4. **Idiopathic thrombocytopenia purpura, in adults or children with a high risk of bleeding or prior to surgery to correct the platelet count**
5. **Guillain Barre` Syndrome**
6. **Kawasaki disease**
7. **Allogenic bone marrow transplantation**

##### Contraindications

Octagam® is contraindicated in individuals who are known to have had an anaphylactic or severe hypersensitivity response to human immunoglobulin. **Individuals with the selective IgA deficiencies should not receive Octagam® or any immune globulin preparation.**

**Precaution in patients who have renal dysfunction or are at risk of developing renal dysfunction, reduction in dose may be required in these patients.**

#### Management of Immunoglobulin Infusions

##### Dosage

- Replacement therapy in primary immunodeficiency syndromes – Recommended starting dose 0.4-0.8 g/kg as a single dose followed by 0.2g/kg every 3 to 4 weeks. If clinical response is inadequate, the dosage may be increased or the interval decreased.
- Replacement therapy for secondary hypogammaglobulinaemia – 0.2-0.4g /kg every 3-4 weeks
- Autoimmune thrombocytopenia – 0.4 g /kg /day for 2- 5 days
- Guillian Barre` Syndrome – 0.4g /kg /day for 3-7 days
- Kawasaki Disease – 1.6 –2.0 g /kg should be administered in dividing doses over 2 –5 days
- Allogenic Bone Marrow Transplantation – 0.5g /kg /week, starting seven days before transplantation and for up to 3 months after transplantation.

Date Created:	February 2006	<b>Administration of Blood Products Immunoglobulin Infusion - Octagam®</b>
Reviewed by:	Lisa Stevenson Blood Nurse	
Approved by:	Best Practice Committee	
		<b>Page 1 of 3</b>

**Administration**

Identify product and patient correctly with two Division 1 Nurses or a RMO and a Division 1 Nurse at the patient's bedside.

Octagam® is administered through an **IMED or similar infusion pump**. A blood filter can be used in the line.

**Octagam is a colourless liquid preparation of 50mg/ml and is available in three sizes**

**2.5 g = 50 mls                      5g = 100mls                      10g = 200mls**

It can be stored at room temperature for 18 months, if refrigerated it should be at room temperature when administering.

**It should not be mixed with other drugs, administer through a separate IV line, peripherally or centrally Normal Saline or Dextrose 5% can be used to prime the line if required.**

**Rate of Infusion**

The rate of administration recommended is to commence at **1ml/kg/hr for 30 minutes**, then if tolerated **increase rate to 2ml/kg/hr for the next 30 minutes**. If it is tolerated, the rate can be **increased to 4ml/kg/hr for 30 minutes** and then **maintained at 5ml/kg/hr**, with a **recommended maximum IV rate of 480mls/hr (24g/hr) regardless of patient weight**.

**Note: Infusion for neonates and paediatrics needs to be reduced refer to HW3 and [Royal Children's Hospital Website clinical Practice guidelines](#)**

WEIGHT (KG)	Initial rate 1ml/kg/hr for first 30 min  Pump rate (ml/hr)	Increase to 2ml/kg/hr for next 30 min  Pump rate (ml/hr)	Increase to 4ml/kg/hr for next 30 min  Pump rate (ml/hr)	May then increase to a maximum rate of 5ml/kg/hr  Pump rate (ml/hr)
40	40	80	160	200
45	45	90	180	225
50	50	100	200	250
55	55	110	220	275
60	60	120	240	300
65	65	130	260	325
70	70	140	280	350
75	75	150	300	375
80	80	160	320	400
85	85	170	340	425
90	90	180	360	450
95	95	190	380	475
100	100	200	400	480
105	105	210	420	480
110	110	220	440	480
115	115	230	460	480
120	120	240	480	480
125	125	250	480	480
130	130	260	480	480
135	135	270	480	480
140	140	280	480	480

- **Maximum recommended rate = 480mls/hr**

**Observations**

- **Pulse, BP, respiratory rate, and temperature** are to be taken **prior to the commencement** of the infusion.

Then at **5 and 15 minutes** after commencement, hypotension and anaphylaxis can

- **Occur during this time**, then
- **Every 30 minutes following every increase**
- **Hourly, when on maximum rate for patient until the infusion is completed.**

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		Page 2 of 3

## IMMUNOGLOBULIN INFUSION - OCTAGAM®

### Adverse Reactions

Ask patient to inform you if they begin to **experience any headache, shivering, flushing, itching, pain, shortness of breath or nausea and vomiting** prior to commencing infusion.

Reactions to intravenous immunoglobulin tend to be **related to the infusion rate** and are most likely to occur **during the first hour of the infusion**.

**Anaphylaxis** can occur, but is rare, if occurs this **denotes a Medical emergency** – notify **MET** or **Code Blue**, management as for Anaphylaxis policy and CPR policy.

Sometimes a premedication may be ordered prior to commencement of infusion

Signs and Symptoms	Management	Delayed Reactions
<ul style="list-style-type: none"> <li>• Abdominal pain</li> <li>• Headache</li> <li>• Chest-tightness</li> <li>• Facial flushing or pallor</li> <li>• Feeling hot</li> <li>• Dyspnoea</li> <li>• Non-urticarial skin rash</li> <li>• Itching</li> <li>• Hypotension</li> <li>• Nausea and vomiting</li> <li>• Arthralgia</li> </ul>	<ul style="list-style-type: none"> <li>• The infusion should be stopped temporarily</li> <li>• Once the patient improves clinically</li> <li>• Cautiously recommence at a slower rate.</li> <li>• Notify the RMO</li> </ul>	<ul style="list-style-type: none"> <li>• Nausea</li> <li>• Vomiting</li> <li>• Chest pain</li> <li>• Rigor</li> <li>• Aching legs</li> </ul> <p><i>These reactions may occur once infusion completed and normally within 24 hours –Notify RMO</i></p>

*Report all reactions to blood bank; complete a Transfusion Investigation form and a RiskMan form.*

### References:

1. Octapharma product information Octagam, Dec 2004
2. Bendigo Health Care Group, -Octagam® Recommended Monitoring and Administration, Nov 2005.
3. Royal Children's Hospital Website - [www.rch.org.au/clinicalguide/](http://www.rch.org.au/clinicalguide/)
4. Melbourne Health, Octagam Reference Table, September 2005

*Further information:*

**Contact Transfusion Service for further information- Blood Bank on 7351.**

**Octapharma Hotline: 1800 780 169 or [www.octapharma.com/australia](http://www.octapharma.com/australia)**