# Octreotide

## Presentation:
Injection 50 micrograms/mL, 100 micrograms/mL and 500 micrograms/mL: all 1mL ampoules

## Indications:
- Bleeding from gastric or oesophageal varices
- Persistent hyperinsulinaemic hypoglycaemia
- Chylothorax
- Excess stoma output

## Dose:

### Bleeding varices
**Children over 1 month:** Initial IV loading bolus of 1 microgram/kg, followed by continuous infusion of 1 microgram/kg/hr. If needed, increase up to a maximum of 3 micrograms/kg/hour (although anecdotally doses up to 5 micrograms/kg/hour have been used). When no active bleeding has occurred for 24 hours, **wean slowly** to avoid rebound bleeding (i.e. halve rate every 6-12 hours and discontinue when dose is 25% of maximum dose used).

**Chylothorax**
- **By continuous IV Infusion:** starting at 1 micrograms/kg/hr, increasing up to 4 micrograms/kg/hour as needed. Up to 10micrograms/kg/hour has been used, but evidence for increased efficacy of the higher doses is limited.
- **By SC Injection:** 10micrograms/kg 8-hourly. Can be increased up to 40 micrograms/kg/day if necessary.

### Hyperinsulinaemia
**By intermittent SC injection:**
- **Neonate:** 2-5micrograms/kg every 6-8hours, adjusted according to response. Maximum 7micrograms/kg every 4 hours.
- **Child 1month-18years:** 1-2micrograms/kg every 4-6hours, adjusted according to response. Max 7micrograms/kg every 4hrs

**By intravenous or SC infusion:**
- 0.2-0.8 micrograms/kg/hour

### Excess stoma Output
**By IV or SC Injection:**
- 0.7micrograms/kg 12-hourly. Gradually increase by 0.3microgram/kg/dose every 3 days up to a maximum of 2 micrograms/kg 8-hourly.

## Route of administration:
Depending upon indication given by either intravenous infusion, subcutaneous or subcutaneous injection.

## Directions for Administration:
**Intravenous Infusion for Bleeding Varices or Chylothorax:** only use the 500microgram/mL strength of the Hospira Brand. Prepare a syringe according to the instructions below; infusion can be left in progress for 24 hours. In the case of bleeding varices, the 1 microgram/kg loading dose can be given from the infusion syringe:

<table>
<thead>
<tr>
<th>Amount of drug to add to 50 mL syringe*</th>
<th>Dilute to 50mL with</th>
<th>1 mL/hr =</th>
<th>Dose range</th>
</tr>
</thead>
<tbody>
<tr>
<td>50 micrograms x weight (kg)</td>
<td>Sodium chloride 0.9%**</td>
<td>1 microgram/kg/hour</td>
<td>Bleeding Varices: 1-3 microgram/kg/hour</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Chylothorax: 1-4 microgram/kg/hour</td>
</tr>
</tbody>
</table>

*Octreotide is very expensive: if the infusion is running at lower rates, add 25 micrograms/kg to 25mL instead; 1mL/hour will still be equivalent to 1 microgram/kg/hour.

**IV Boluses:** dilute required dose with an equal volume sodium chloride 0.9% and give over 3-5 minutes. ECG and blood pressure monitoring needed if given by intravenous injection.

**Subcutaneous Injection:** administer neat. Rotate injection sites.

## Cautions and Contraindications:
- Avoid abrupt withdrawal. Use with caution in insulinoma and diabetes mellitus (reduced insulin requirement). Inhibits gall bladder motility, bile acid secretion and bile flow.

## Common Side Effects:
- Anorexia, nausea, vomiting, abdominal pain, bloating, diarrhea, bradycardia, dyspnoea, headache, dizziness. Abrupt withdrawal is associated with biliary colic and pancreatitis. Irritation (pain, stinging or burning) may occur at subcutaneous injection sites. Rarely hepatitis. Hyperglycaemia or hypoglycaemia.

## Compatibility (Y-site):
- No information available. Do not mix with other drugs: administer via dedicated line.

## Additional Comments:
**Not compatible with Dextrose 5% containing-solutions.
 Stored in fridge, allow injection to reach room temperature before administration. No dose adjustments required in renal impairment.

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**Version 1, January 2014, Review January 2016.**
Checked: Andrew Wignell, PICU Pharmacist/Bev Harwood Paediatric Oncology Pharmacist
Approved: PICU Consultants
References