Ballarat Health Services

DRUG GUIDELINE

OCTREOTIDE (Intravenous – bleeding oesophageal varices)

SCOPE (Area): **FOR USE IN:** Critical Care Unit, ED, Theatre and General Wards
EXCLUSIONS: Paediatrics (seek Paediatrician advice)
SCOPE (Staff): Medical, Nursing and Pharmacy

BRAND NAMES
Sandostatin® and generics.

PHARMACOLOGY AND PHARMACOKINETICS
Octreotide is a longer acting synthetic analogue of the naturally occurring hormone somatostatin (growth hormone inhibiting peptide). It inhibits the secretion of serotonin, gastoenteropancreatic peptides (gastrin, glucagon, insulin, motilin, pancreatic polypeptide, secretin and vasoactive intestinal peptide [VIP]) and growth hormone. Octreotide is a splanchnic arteriolar vasoconstrictor, reducing splanchnic blood flow and portal pressure. Octreotide is both hepatically and renally cleared with a half life of 1.5 hours.

INDICATIONS
- Bleeding oesophageal varices (adjunct to banding/sclerotherapy/surgery)- octreotide is the second line treatment as per Therapeutic Guidelines, terlipressin is first line.
- **Other indications of octreotide (including the use of long acting octreotide) are not covered by this guideline.**

CONTRAINDICATIONS
- **Hypersensitivity to octreotide.**

PRECAUTIONS
- **Diabetes** - octreotide can increase or decrease blood glucose. Monitor carefully and adjust dose of insulin or oral antidiabetic medications if necessary.
- **Insulinoma** - increased risk of severe and prolonged hypoglycaemia when treated with octreotide.

PREGNANCY AND BREASTFEEDING
Seek specialist advice before prescribing, information may update regularly.

DRUG INTERACTIONS

- **Medications affecting blood glucose concentration** - octreotide can increase or decrease blood glucose concentration.
- **Ciclosporin/Cyclosporin** - octreotide may cause a reduction in the absorption of ciclosporin.
- **Opioids –** octreotide may decrease the analgesic effects of opioids by an unknown mechanism.
- **Bromocriptine** – octreotide may increase the serum concentration of bromocriptine.
- **Ceritinib –** use with octreotide may cause bradycardia, closely monitor heart rate and blood pressure during therapy. Avoid using together**.**

DOSAGE AND ADMINISTRATION

For administration

- **in Critical Care Unit, ED and Theatre**
- **in General Wards**

Administer via CVC, midline or peripheral line.

Note: IV infusions are to be prepared with 0.1 mg/1 mL ampoules (stocked in ED and CCU). A higher strength ampoule (0.5 mg/1 mL) is stocked in the Pharmacy and reserved for higher dose subcutaneous infusions for palliative care patients. The packaging for both strengths is similar, always check carefully to ensure correct strength has been selected.

Although compatible, it is recommended not to dilute in glucose 5% as octreotide can increase or decrease blood glucose levels.

IV injection (loading dose prior to infusion):
Use octreotide 0.1 mg/1 mL ampoules.
Octreotide 50 microgram (0.5 mL from 0.1 mg/1 mL ampoule) undiluted (or may be diluted up to 10 mL with sodium chloride 0.9%) over 3 mins.

IV infusion following loading dose (via CVC, midline or large peripheral vein):
Use octreotide 0.1 mg/1 mL ampoules to prepare infusion.
Withdraw 5 mL from a 100 mL sodium chloride 0.9% minibag.
Octreotide 0.5 mg (5 mL from FIVE 0.1 mg/1 mL ampoules) added to remaining 95 mL sodium chloride 0.9% in the minibag.
Total Volume: 100 mL.
Final concentration: 5 microgram/mL.
Rate range: 25-50 microgram/hr (5-10 mL/hr).
Maximum rate: 50 microgram/hr (10 mL/hr).
Length of infusion: As decided by Gastrointestinal Unit, usually for 48 hours (up to 5 days has been used).

Syringe Unit/Pump IV infusion:
Use octreotide 0.1 mg/1 mL ampoules to make up infusion.
Octreotide 0.25 mg (2.5 mL from three 0.1 mg/1 mL ampoules) diluted to 50 mL with sodium chloride 0.9% in a luer lock syringe.
Total Volume: 50 mL.
Final concentration: 5 microgram/mL.
Rate: as for IV infusion above.

General Administration Information

- **Infusion preparation:**
  Mix infusion thoroughly after adding octreotide to avoid inadvertently giving a more concentrated dose.
  Discoloured solutions or solutions with particulate matter should not be used.
  Sodium chloride 0.9% can be substituted for different compatible IV fluid as requested by the Medical Officer.
  Infusion stable for 24 hours in sodium chloride 0.9%.
- **Infusion pump:** Alaris pump with Guardrails.
- **Routes of administration:**

IV injection:	Yes
IV intermittent infusion:	Yes
IV continuous infusion:	Yes
IM injection:	No
Subcut injection:	Yes

- **Compatible/incompatible IV drugs/fluids:**
  Consult the Australian Injectable Drugs Handbook ('Yellow book') in your ward area. **Assume all unlisted drugs and IV fluids are incompatible – contact Pharmacy for further advice.**

MONITORING (INCLUDING BLOOD TESTS)

- Nil.

NURSING PRACTICE POINTS

- Monitor blood glucose.

ADVERSE EFFECTS

- **Common –** abdominal pain, flatulence, nausea, vomiting, diarrhoea, gallstones, fatigue, hyperglycaemia, hypoglycaemia, local transient reaction at injection site.
- **Rare –** hypothyroidism, pancreatitis, hepatic dysfunction, bradycardia.

DRUG PRESENTATIONS, LOCATION AND STORAGE

Octreotide (acetate) 100 microg/1 mL ampoules.
Note: 100 microgram = 0.1 mg.
Imprest locations (at the time of guideline development): 0.1 mg/1 mL - ED and CCU.
Store at 2-8°C. Protect ampoules from light.
