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®.
Octreotide Acetate DBL®.
Octreotide MaxRx®.

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, gastroenteropancreatic 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).
▪ Other indications of octreotide (including the use of long acting octreotide) are not covered by this guideline.

CONTRAINDICATIONS
▪ Hyersensitivity 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 used with octreotide.

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

DRUG INTERACTIONS
▪ Drugs that prolong the QT interval - Octreotide may prolong the QT interval further, especially drugs with a stronger QT interval effect (e.g. amiodarone, cisapride, citalopram,
escitalopram, disopyramide, flupenthixol, paliperidone, quetiapine, quinine, sotalol, thioridazine, ziprasidone, zuclopenthixol). Monitor QT interval where relevant.

- **Medications affecting blood glucose concentration** - octreotide can increase or decrease blood glucose concentration.
- **Cyclosporin** - octreotide may cause a reduction in the absorption of cyclosporin.
- **Opioids** – octreotide may decrease the analgesic effects of opioids by an unknown mechanism.

### 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 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 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 Pump IV infusion:**
**For use in ED only**
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.
- **Infusion pump:** Volumetric pump.
- **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)

- Consider QT interval monitoring via ECG where relevant (see Drug Interactions).

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 mcg/1 mL ampoules and 500 mcg/1 mL ampoules. Note: 100 microgram = 0.1 mg, 500 microgram = 0.5 mg. Imprest locations (at the time of guideline development): 0.1 mg/1 mL - CCU. Store at 2-8°C. Protect ampoules from light.