Octreotide Intravenous for Adults

Who can administer

May be administered by registered competent doctor or nurse/midwife

Important information

- **Liver cirrhosis:** increased half-life possible, **consider reduction of maintenance dose**
- May **restore fertility in female acromegalic patients**, those of child-bearing age should be advised to ensure adequate **contraception** if desired
- **Drug interaction potential** e.g. ciclosporin (may decrease ciclosporin levels), anti-diabetic agents

Available preparations

Sandostatin 50 micrograms per 1ml ampoule

Sandostatin 100 micrograms per 1ml ampoule

Sandostatin 500 micrograms per 1ml ampoule

Reconstitution

Already in solution

Draw up using a 5 micron filter needle

Infusion fluids

Sodium chloride 0.9% **ONLY**

Methods of intravenous administration

Important

- **Consider subcutaneous administration,** except where a rapid response is required [(ref 1)]

Bolus intravenous injection (in emergencies)

- May be given undiluted (unlicensed) by rapid intravenous injection , if slow IV injection considered inappropriate [(ref 1)]

Slow intravenous injection [(ref 2)]

- For each 1ml of octreotide dilute with 1 to 9ml sodium chloride 0.9%
- Administer over three to five minutes

Intermittent intravenous infusion

- Add required dose to 100 to 200ml infusion fluid and administer over 15 to 30 minutes [(unlicensed, ref 1)]
- A 50ml infusion may be used if required (eg fluid restriction) but the residual volume in the infusion line must be flushed through at the same rate to avoid significant underdosing

Continuous intravenous infusion

- Add 500 micrograms to produce a total volume of 250ml (2 micrograms/ml) and administer at a rate according to dosage section [ref 3]. Alternative dilution 500 micrograms in 60ml (8.3 micrograms/ml)

Dose in adults

Important: The **subcutaneous** route is the **preferred** route in many circumstances

(doses listed below apply to IV route, subcutaneous doses sometimes vary. Refer to www.uptodate.com (ref 3))

Indication	Â	IV dose	Notes/Comments
LICENSED INDICATIONS			
Oesophageal varices (bleeding)	Usual dose	Give 25micrograms per hour by continuous intravenous infusion for five days. Doses of up to 50micrograms per hour have been used in cirrhotic patients	Â
UNLICENSED INDICATIONS [ref 3]			
Carcinoid CRISIS (unlicensed)	Emergency surgery	500 to 1000microgram STAT 1 to 2 hours prior to procedure	(for somatostatin analogue-naive patients)
	Intraoperative use with HYPOtension	500 to 1,000 microgram bolus followed by continuous infusion of 50-200microgram /hour during procedure	Adapted for safe local use. Alternatively instead of infusion can repeat 500-1000 microgram doses after 5 minutes until symptoms are controlled
	Postoperative	Continue infusion above **if needed**, then revert to preoperative schedule	Â
Diarrhoea (complicated, associated with chemotherapy) (unlicensed)	Usual dose	100 to 150microgram every eight hours, or an infusion at 25-50microgram/hour (may escalate to 2000microgram every eight hours until controlled)	Discontinue therapy within 24 hours of resolution of diarrhoea to reduce the risk of ileus
Gastro-entero-pancreatic endocrine tumours (IV route unlicensed)	Â	**Start at:** 200 to 300microgram daily in 2 to 4 divided doses **Usual dose:** 150 to 450micrograms per day	Dose of greater than 450micrograms are rarely required
		In carcinoid tumours, if there is no beneficial response within one week of treatment at the maximum dose, therapy should not be continued	

Monitoring

- **ECG and blood pressure** monitoring is required
- Monitor **heart rate** (bradycardia commonly reported)
- Monitor **blood glucose** in all patients. This is especially important in patients with insulinomas (because octreotide is more potent at inhibiting the secretion of GH and glucagons than it is at inhibiting insulin. This is especially the case upon the introduction of the drug and at each change of dose)
- Monitor **blood glucose** for patients with oesophageal varices as there is an increased risk for the development of insulin-dependent diabetes or for insulin changes in patients with pre-existing diabetes
- Monitor **LFTs**
- **Long term therapy**: Monitor **thyroid** function, six-monthly ultrasound checks for **gall stones**, monitor in patients with a history of **pancreatitis**, and also monitor vitamin **B12** levels.

Further information

Conversion to LA formulations

- Long acting formulations of octreotide, or lanreotide are available (depot IM route only)
- For some of these an **overlap period** is required with immediate release octreotide, for others there is no overlap period. Consult BNF or SPCs for administration details.
- Sandostatin LAR is octreotide Somatuline LA and Somatuline Autogel are lanreotide
- High tech prescription required on discharge

Storage

- Store at 2-8^{0}C - do not freeze
- Unopened ampoules may be stored at room temperature (30^{0}C) for up to two weeks

References

SPC November 2021

1: Martindale, The complete Drug Reference accessed online via www.medicinescomplete.com17th Jan 2023

2: Injectable Medicines Administration Guide Medusa, accessed online 17th Jan 2023

3: UptoDate- accessed online 17th Jan 2023

Therapeutic classification

Synthetic analogue of naturally occurring somatostatin