

# Octreotide

## Endocrinology Shared Care Guideline

### Specialist Details

Name: \_\_\_\_\_

Location: \_\_\_\_\_

Tel: \_\_\_\_\_

### Patient Identifier

Date: \_\_\_\_\_

### Introduction

Octreotide is an analogue of natural hypothalamic release-inhibiting hormone, somatostatin. It exerts inhibitory effects on the secretion of growth hormone and on various peptides of the gastroenteropancreatic endocrine system.

**Licensed indications:** Acromegaly, neuroendocrine (particularly carcinoid) tumours and thyrotropic adenomas (TSH-omas)

### Adult Dosage and Administration

#### Acromegaly

**Octreotide LAR depot preparation:** the usual initial dose is 20mg by deep IM injection into the gluteal muscle every 4 weeks. The dose may be increased to a licensed maximum of 30mg every 4 weeks. In some cases doses up to 40mg are used.

**Octreotide by subcutaneous injection:** Initially 0.05 mg to 0.1mg every 8 or 12 hours. In most patients, the optimal daily dose will be 300 micrograms. A maximum dose of 1500 micrograms per day should not be exceeded.

Dose adjustment is based on subsequent measurements of circulating growth hormone (GH) and/or Insulin like Growth Factor-1 (IGF-1), symptoms and adverse effects.

#### GEP-NET tumours

**Octreotide depot preparation:** initially 30mg by deep IM injection into the gluteal muscle every 4 weeks for 3 months. The doses may be titrated as per patient response.

Treatment maybe initiated using the 50 micrograms/ml subcutaneous injection until adequate control is achieved before changing to the depot preparation.

Initially: 50 micrograms once or twice daily by subcutaneous injection, increasing to 200micrograms three times daily. For patients who are poorly controlled the effective subcutaneous dose may be continued for two weeks after the first depot injection.

**Available as:** Octreotide injection: 1ml solution for injection:50micrograms/ml,100micrograms/ml, 500 micrograms/ml, 5ml solution for injection: 200micrograms/ml.

Octreotide depot preparation :10 mg, 20mg or 30mg powder and solvent for suspension for injection

## Hospital Specialist Responsibilities

### Baseline tests:

- Hormone levels: IGF-1, GH, Thyroid function,
- Baseline ultrasonic examination of the gallbladder is recommended if indicated.
- Consider monitoring Vitamin B12 Levels (in patients with a history of B12 deprivation)
- Diagnose the condition and assess if the patient is suitable for treatment with octreotide.
- Arrange shared care with the patient's GP.
- Provide patient/carer with relevant written information on use, side-effects and need for monitoring of medication.
- Undertake the baseline tests and communicate to the GP that these have been done.
- Monitor liver and thyroid function as clinically indicated.
- Review results of safety monitoring and request additional tests as required.
- Monitor response to treatment from hormone levels at each review appointment and need to continue therapy.
- Continue to review the patient at agreed specified intervals, sending a written summary to the GP whenever the patient is reviewed.
- Provide any other advice or information for the GP if required.

## GP Responsibilities

- Prescribe octreotide; continued prescribing is appropriate for patients attending regular review.
- Adjust the dose as advised by the specialist.
- Report adverse drug reactions to initiating specialist and usual bodies (e.g. CHM, MHRA).
- Ensure no significant drug interactions with other medicines.

## Adverse Effects, Precautions and Contraindications

### Caution advised with:

- **Bradycardia:** In patients without underlying cardiac problems octreotide may lead to a decrease of heart rate without necessarily reaching the threshold of bradycardia. In patients suffering from cardiac disorders prior to octreotide treatment, sinus bradycardia may occur. Care should be taken when initiating treatment with in patients with bradycardia. Concomitant administration of bradycardia-inducing drugs (e.g. beta blockers) may have an additive effect on any associated slight reduction of heart rate. Dose adjustments of such concomitant medications may be necessary.
- **Altered glucose regulation:** Due to possible inhibitory effects on secretion of insulin and glucagon (both hyperglycaemia and more rarely hypoglycaemia have been reported) In patients with concomitant diabetes mellitus; monitoring of glucose tolerance is recommended and adjustment of antidiabetic therapy may be necessary.
- **Gallstone formation:** Octreotide may reduce gall bladder motility and may lead to gallstone formation in long-term recipients.
- **Tumour expansion:** can occur during treatment (e.g. possible visual field defects).
- **History of B12 deprivation:** Octreotide may alter absorption of dietary fats in some patients. Depressed vitamin B12 levels and abnormal Schilling's tests have been observed in some patients receiving octreotide therapy.

### Commonly reported side effects:

**GI side effects:** Abdominal pain, anorexia, bloating, diarrhoea, flatulence, nausea, steatorrhoea, vomiting, constipation, dyspepsia, malaise. Administering non-depot injections of octreotide between meals and at bedtime may reduce gastro-intestinal side-effects.

**Gallstones:** After long-term treatment.

**Altered glucose regulation:** Hyperglycaemia (with chronic administration), hypoglycaemia; impaired postprandial glucose tolerance with chronic administration.

**Cholelithiasis-induced pancreatitis:** Has been reported with long-term treatment. Very rarely, acute pancreatitis has been reported within the first hours or days of treatment. Abrupt withdrawal of subcutaneous octreotide is associated with biliary colic and pancreatitis.

**Others:** Pruritus, rash, alopecia, bradycardia, dizziness, headache, lethargy, musculoskeletal pain, myalgia.

**Pregnancy:** Should only be used if potential benefit outweighs risk.

**Breast feeding:** Patients should not breast-feed.

## Common Drug Interactions

### Use Octreotide with caution in association with:

- **Ciclosporin:** Octreotide decreases the absorption of oral ciclosporin. Manufacturer advises adjust ciclosporin dose.
- **Dopaminergics:** octreotide increases plasma concentration of bromocriptine.
- **Medications metabolised by CYP3A4** which have a narrow therapeutic index (e.g. carbamazepine, digoxin, warfarin and terfenadine); caution should be exercised during co-administration.
- **Concomitant administration of bradycardia-inducing drugs (e.g. beta blockers):** may have an additive effect on the slight reduction of heart rate associated with octreotide. Dose adjustments of such concomitant medications may be necessary.
- **Antidiabetics:** May require change in antidiabetic doses as octreotide can inhibit the secretion of insulin and glucagon.
- **Cimetidine:** Absorption of cimetidine may be reduced.

## Communication

For any queries relating to this patient's treatment with octreotide, please contact the specialist named at the top of this document.

This information is not inclusive of all prescribing information and potential adverse effects.  
Please refer to full prescribing data in the SPC or the BNF

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