Western Locality Shared care information on the prescribing of somatostatin analogues – acromegaly in adults

April 2013

- Somatostatin analogues
- Treatment of: Acromegaly in adults

Aim of Treatment

Treatment of patients with acromegaly who are adequately controlled on treatment with octreotide or lanreotide: in whom surgery, radiotherapy or dopamine agonist treatment is inappropriate or ineffective, or in the interim period until radiotherapy becomes fully effective.

Acromegaly is a rare growth disorder (yearly incidence of 4-6 patients per million) characterised by a clinical syndrome resulting primarily from the effects of excess growth hormone and insulin-like growth factor-1 (IGF-1) on various organ systems. Acromegaly is almost always caused by a pituitary tumour. There are three therapeutic options for confirmed acromegaly - surgery, radiotherapy and pharmacological therapy. Octreotide and Lanreotide are pharmacological options. They appear to be effective in 55-70% of patients.

Somatostatin analogues exert potent inhibitory effects on the secretion of growth hormone and on various peptides of the gastroenteropancreatic endocrine system.

The drug formulations commonly used in acromegaly treatment are biodegradable polymer microspheres that contain and release the drug slowly over a 14-28 day period. Dose adjustments are based on clinical symptoms, suppression of GH and normalisation of IGF-1.

Specialist responsibilities

1. Initiation of drug treatment, provide first prescription(s) of the drug for the patient's condition ensuring that the condition is stabilized.
2. To send a letter to the GP requesting shared care for a particular patient
3. Provide the patient or patient's parents/guardians/carers with suitable written and verbal information about the drug prior to starting medication and discuss the benefits and side effects of treatment.
4. Baseline monitoring of Insulin Growth Factor-1 and Growth hormone levels with appropriate monitoring review. Ultrasound of gallbladder at start of treatment and review at 6 month interval thereafter.
5. Communicate relevant treatment and education issues with the patient
6. Specify review dates at clinically relevant time intervals for both the GP and the consultant.
7. Prompt communication with GP of any changes in treatment or dose requirements, results of monitoring undertaken and assessment of adverse events.
8. Advice to GPs on when to stop treatment or alter dose.
9. Provide the GP with relevant contact information with clear arrangements for back-up advice and support should further assistance be required relating to this drug.

10. Report adverse events to the MHRA

General practitioner responsibilities

If GP has agreed to share care:

1. To contact the referring consultant without delay if they do not wish to enter into a shared care agreement.
2. Take on prescribing of the somatostatin analogue from the second prescription after communication from the specialist that the patient is stabilised.
3. Prescribe 1 month of somatostatin analogue at a time.
4. Keep a record of test results in the patient's notes.
5. Prompt referral to a specialist if there is a change in the patient's health status.
6. Reporting to and seeking advice from a specialist on any aspect of patient care which is of concern to the GP and may affect treatment.
7. Report adverse events to the specialist and MHRA.
8. Stopping treatment in the case of a severe adverse event or as per shared care guideline.

Monitoring

Monitoring in secondary care

- Evidence of disease control should be based on normalisation of IGF-1 and reduction of growth hormone on oral glucose testing.
- IGF-1 should be assessed every 6 months.
- Annual growth hormone monitoring.
- Baseline ultrasonic examination of the gallbladder and biliary system according to SPC or local protocol.
- To decide on a 6-monthly basis whether to perform ultrasonic examination of the gallbladder and biliary system during somatostatin analogue therapy (local variation on the SPC).
- Annual thyroid function tests for patients receiving therapy over 1 year in duration.
- In patients whose condition is stable annual review may be recommended

Monitoring during treatment – general practice

- There are no specific biochemical monitoring requirements for the GP to undertake other than refer to specialist team if an adverse effect of the drug is noted.

Back-up advice and support

Endocrinology

• Dr P Chong	01752 791264
• Dr P English	01752 439689
• Dr D Flanagan	01752 517577
• Dr F Wotherspoon	01752 517938
• Prof. John Pinkney	01752 439811
• Gina Twine (Endocrine nurse)	01752 439812

Derriford Medicines Information: 01752 439976

Medicines Optimisation Teams

- NEW Devon CCG, Western Locality 01752 398800
- Kernow CCG 01726 627953

Supporting Information

Preparations

Sandostatin® (octreotide) Lar 10-mg, 20-mg and 30-mg vial

- Store at 2 to 8°C, protect from light. Can remain at room temperature on the day of injection. However the suspension must only be prepared immediately prior to injection.

Somatuline® (lanreotide) LA 30mg, Autogel: 60mg, 90mg, 120mg

Dose

Initiation:

- **Octreotide - Sandostatin® Lar**: Administered by deep intragluteal injection once every four weeks, alternated between the left and right gluteal muscle. The usual starting dose is 20mg every four weeks for three months.
- **Lanreotide - Somatuline® LA**: Administered by intramuscular injection, 30mg every 14 days initially. Subsequently the frequency of injection may be increased to every 7-10 days based upon the clinical and biochemical response.
- **Lanreotide - Somatuline® Autogel**: Administered by deep subcutaneous injection (alternated between the left and right gluteal muscle), 60mg every 28 days initially in patients receiving a somatostatin analogue for the first time. For patients considered by the specialist to be stabilised on their treatment with Somatuline Autogel, the injection may be administered by an appropriately trained friend or relative of the patient. Alternatively, such patients may self-administer the product after appropriate training. In this case the injection should be given in the upper, outer thigh.

Maintenance:
The maintenance dose may be reduced if:

- GH concentrations are consistently below 1µg/L (2mU/L) after an oral glucose load test.
- IGF-1 serum concentrations have normalised.

Occasionally higher doses are used in resistant cases, which will require more frequent review in secondary care. Individual doses will be advised by the Endocrine team based on the patient's response to treatment.

Contraindications

- Hypersensitivity to lanreotide or octreotide, Lactide-glycolide copolymer, Lactic-glycolic copolymer, Mannitol, Carmellose or Polysorbate 80.
- Experience with lanreotide or octreotide in pregnancy or breastfeeding is not available and thus not recommended. BNF reports possible effects on foetal growth in second and third trimesters.

Cautions

- Slight decreases in thyroid function have been seen during treatment with lanreotide in acromegalic patients, although clinical hypothyroidism is rare (<1%). Tests of thyroid function should be done where clinically indicated.

- Impaired insulin and/or glucagon secretion is known with somatostatin analogues. In patients with concomitant diabetes mellitus; monitoring of glucose tolerance and any antidiabetic treatment is recommended.
- Patients with liver or kidney dysfunction are recommended to have organ function tested and dose adjustments made according to the results.
- Uncommon cases of bradycardia have been reported. Dose adjustments of drugs such as beta-blockers, calcium channel blockers, or agents to control fluid and electrolyte balance, may be necessary

Side effects

(Refer to SPCs for further information)

- Injection site reactions (local pain and, rarely, swelling and rash); GI side effects (nausea, vomiting, cramping abdominal pain, abdominal bloating, flatulence, loose stools, diarrhoea and steatorrhoea); gallstone formation.
- Symptoms resembling acute intestinal obstruction; acute pancreatitis has been reported within the first hours or days; cholelithiasis-induced pancreatitis; acute hepatitis without cholestasis (normalised on withdrawal of s/c octreotide); slow development of hyperbilirubinaemia, transient hair loss.
- Steatorrhoea may respond to pancreatic enzyme treatment. Advice may be sought from the Endocrine department

Interactions

(Refer to the BNF for further information)

The following drugs have a potentially serious interaction with somatostatin analogues, and caution must be used when prescribing concurrently:

- May require change in antidiabetic medicine doses: (metformin, sulphonylureas, 'glitazones', 'glinides' and insulins) as somatostatin analogues can alter drug requirements due to inhibitory effects on the secretion of insulin and glucagon.
- Possible reduced intestinal absorption of ciclosporin leading to lower plasma levels
- Possible delayed absorption of cimetidine.
- Concomitant administration of somatostatin analogue and bromocriptine may increase the bioavailability of bromocriptine.
- Caution should be exercised during co administration of octreotide and drugs mainly metabolised by CYP3A4, which have a low therapeutic index (e.g. carbamazepine, digoxin, warfarin and terfenadine).

Shared Care Agreement Letter – Consultant Request

To: Dr.....

Practice Address.....

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Patient Name:	
NHS Number:	
Date of birth:	
Address:	

Diagnosed condition: .....

I recommend treatment with the following drug: .....

At the following dosage: .....

I request your agreement to sharing the care of this patient according to the Western Locality Shared Care Information guidelines for this drug. The patient has been initiated on treatment and stabilised in accordance with the appropriate Shared Care Information.

Principles of shared care:

GPs are invited to participate, but **if the GP is not confident to undertake these roles then they are under no obligation to do so.** If so, the total clinical responsibility for the patient for the diagnosed condition remains with the specialist. If asked to prescribe this drug the GP should reply to this request as soon as practical. Sharing of care assumes communication between the specialist, GP and patient. The intention to share care should be explained to the patient and accepted by them.

Remember: the doctor who prescribes the medication has the clinical and legal responsibility for the drug and the consequences of its use.

Signed:		Date:	
Consultant name:			
Telephone number:		Fax number	
Email address			

Please sign below and return promptly. Remember to keep a copy of this letter for the patient's records. If this letter is not returned shared care for this patient will not commence.

GP Response

I agree / do not agree* to share the care of this patient in accordance with the Shared Care Guideline.

Signed: ..... Date: .....

GP name: ..... *Delete as appropriate.