

South West Essex Medicines Management Committee

Gonadorelin Analogues in Prostatic Carcinoma Shared Care Protocol

Introduction

Goserelin, Triptorelin Decapeptyl and Leuprorelin Acetate are synthetic analogues of gonadotrophin releasing hormone (GnRH) used in the treatment of prostatic carcinoma.

GnRH analogues act in a similar way to gonadorelin to stimulate luteinising hormone (LH) and follicle-stimulating hormone (FSH) production by the pituitary. However, as a result of their continued presence at the receptor, suppression of LH and FSH release occurs after the initial stimulation phase. The decrease in LH following administration of Goserelin or Leuprorelin acetate results in a reduction in testosterone production to a level similar to that seen after surgical castration. Most prostate cancers are testosterone dependant and Goserelin, Leuprorelin acetate or Triptorelin Decapeptyl therapy can therefore retard or halt tumour growth.

During the initial stage of treatment increased production of testosterone may be associated with progression of prostate cancer. In susceptible patients this “tumour flare” may cause spinal cord compression, ureteric obstruction or increased bone pain. Anti-androgens, such as cyproterone acetate, flutamide or bicalutamide are recommended for “tumour flare”.

Due to the need for regular outpatient follow-up, it is not possible to fully discharge patients with prostate cancer back to primary care. However, a shared care protocol, encompassing primary and secondary care, is appropriate. The principal advantage of a shared care protocol is that patients can receive their regular injections of Goserelin, Triptorelin or Leuprorelin acetate in their GP surgery or at their home, rather than having to attend a hospital outpatient clinic.

‘Shared Care’ implies that the hospital specialist performs certain aspects of a patient’s management, whereas others are performed by the GP. A shared care protocol should define the aspects of care of which the GP will be responsible and should provide sufficient information on treatment and/or monitoring to enable the GP to accept this responsibility.

Specialist Clinician Responsibility

The specialist clinician will:

- Initiate and administer the first dose of the gonadorelin analogue at the hospital
- Prescribe an anti-androgen to cover disease flare if necessary
- Discuss the benefits and side effects of the treatment with the patient
- Provide routine monitoring of the presenting condition and the effect that Goserelin, Triptorelin or Leuprorelin acetate therapy is having on it. PSA will be assessed at three to six months and thereafter the interval will be determined by the response to the treatment and other clinical issues
- Be responsible for stopping the treatment or advising the GP to stop treatment if appropriate
- Monitor LFTs and FBC if deemed clinically appropriate every 6 months
- Arrange with the GP to monitor the PSA if required
- Only hand back responsibility for the patient if all parties (Consultant, GP, Practice Nurse, District Nurse) agree to this arrangement. On referral, the patient will be given a treatment summary containing details of their gonadorelin analogue therapy, (and any associated drug therapy) and a

clinical summary. The patient will be given 4 weeks supply of any medication other than their gonadorelin analogue therapy. A full referral letter will follow.

General Practitioner Responsibility

The GP will:

- Prescribe and administer maintenance therapy as instructed in the initial specialist clinician letter.
- Ensure that the practice nurses are competent at the relevant technique for administering the gonadorelin analogue on their behalf
- Report of any adverse events presented by the patient. Diabetic patients may require more frequent blood glucose monitoring.
- Stop treatment, either on the advice of the specialist clinician or in the event of unacceptable side effects. In the latter case the patient should be referred to the specialist clinician to determine future treatment options.

Joint Primary / Secondary Care Responsibility

The Consultants at BTUH will support the GPs with this shared care protocol, new patients will be initiated on Goserelin, Triptorelin decapeptyl or Leuprorelin acetate injections by the Specialist Nurse / Urology Clinic and the follow-up injections will be administered in the Community by the GP/designated centres as agreed by CCG.

Funding

GPs will be encouraged to prescribe drugs for prostatic carcinoma in line with this shared care protocol. The cost of these drugs will be taken into account when monitoring budgetary performance.

Access and Contact Points

Specialist clinicians are available to give advice. Contact details as shown below or through the main hospital switchboard.

Petra Orebanwo- Network Uro-Oncology Nurse Specialist - via switchboard/Pager
Ext: 8491

Mr Ravi's Secretary: - Tracy Jones, Tel: - 01268 598486

Mr Vohra's Secretary: - Louise Rowling, Tel: - 01268 598521

Mr Hemant Nemade Secretary: - Wendy page, Tel: - 01268 598684

Dosage Information

Leuprorelin acetate is presented as a depot injection of either 3.75mg (one monthly) administered as a single subcutaneous or intramuscular injection via a 21-gauge needle or 11.25mgs (three monthly) administered as a single subcutaneous injection via a 23-gauge needle.

Goserelin is presented as a depot injection of either 3.6mg (one monthly) or 10.8mg (three monthly), both administered as single subcutaneous injections.

Triptorelin decapeptyl is presented as a depot injection of either 3mg (one monthly) or 11.25mg (three monthly) for intramuscular administration.

The therapy should be continuous, regardless of whether improvement or remission occurs. Injection sites should be varied periodically.

No dose adjustments are necessary in elderly or renal impaired patients.

Adverse Effects

Side effects seen with Goserelin, Triptorelin or Leuprorelin acetate are due mainly to the specific pharmacological action, namely increases and decreases in certain hormone levels.

In cases where a "tumour flare" occurs after Goserelin, Leuprorelin or Triptorelin therapy, an exacerbation may occur in any symptoms or signs due to disease, for example, bone pain, urinary obstruction etc. These symptoms subside on continuation of therapy.

It is usual to give a short course of an anti-androgen such as cyproterone to counteract this effect. Usual dose of Cyproterone acetate is 100mg three times a day for 2-3 weeks after starting treatment. Cyproterone is not recommended for long-term use due to the risk of hepatic reactions on prolonged use. If maximum androgen blockade is indicated then Flutamide 250mg three times a day or Bicalutamide 50mg once a day are the preferred options.

Other side effects are generally mild and seldom require withdrawal of therapy. They include hot flushes, decrease in libido, breast swelling and breast tenderness. Mild bruising can occur at the injection site.

For a full list of the undesirable effects refer to the manufacturers Summary of Product Characteristics.

Drug Interactions

No significant drug interactions have been reported for Goserelin and Leuprorelin, however Triptorelin should not be prescribed concomitantly with drugs which raise prolactin levels as they reduce the level of LHRH receptors in the pituitary.

References:

1. www.medicines.org.uk, Decapeptyl SR 11.25mg, Ipsen, Document last updated on the eMC: 20/05/2014, Date of revision of the text: 01 May 2014.
2. www.medicines.org.uk, Decapeptyl SR 3mg, Ipsen, Document last updated on the eMC: 20/05/2014, Date of revision of the text: 01 May 2014
3. www.medicines.org.uk, PROSTAP 3 Leuprorelin Acetate Depot Injection 11.25mg. Takeda UK Ltd, Document last updated on the eMC: 03/05/2013, Date of revision of the text: 28/11/2012
4. www.medicines.org.uk, Zoladex 3.6 mg Implant, AstraZeneca UK Ltd, Document last updated on the eMC: 19/02/2013, Date of revision of the text: 25th January 2013

Acknowledgement

- S Brighton and Hove City Primary Care Trust; Shared Care Protocol; Leuprorelin (Prostap SR, Prostap 3) or Goserelin (Zoladex, Zoladex LA), In the Treatment of Advanced Prostatic Cancer; May 2003
- MSW Health; Shared Care Guidelines, the Management of Patients with Prostate Carcinoma.
- Whipps Cross University Hospital NHS Trust; Shared Care Protocol, Leuprorelin (Prostap) in Prostate Cancer; March 2001