Shared Care Guidelines: Use of Gonadotrophin Releasing Hormone (GnRH) Agonists - Triptorelin

General Guidance:
Shared care is the mechanism of sharing patient care between primary and secondary care providers. Sharing of care assumes good communication between the patient and all professionals in primary care (GP) & secondary care (hospital consultant, specialist nurses, pharmacist etc). The intention to share care with the GP should be explained to the patient and their carers by the specialist initiating treatment and an outline of responsibilities provided.

The doctor who prescribes the medication legally assumes clinical responsibility for the drug and the consequences of its use. If a GP is invited by a specialist to participate in a shared care arrangement and is not confident to undertake these roles, then he or she is under no obligation to do so, but should discuss this with the specialist as soon as possible.

Shared Care Criteria
Treatment with GnRH agonists should always be initiated and monitored by a specialist (Consultant Paediatric Endocrinologist or Consultant Paediatrician with expertise in growth disorders) as recognised by the British Society for Paediatric Endocrinology and Diabetes (BSPED).

General Guidelines for Shared Care Strategy:
1. Patients started on GnRH agonist therapy require specialist supervision and review in a growth/endocrine clinic 2-3 times a year.
2. GnRH agonists have a good safety record. Currently, Triptorelin, Prostap SR DCS and Prostap 3 DCS are licensed for use in children with central precocious puberty.
3. Dose adjustments (by altering the frequency of injections) may be required intermittently and should be instigated by the supervising Consultant based on continuing pubertal changes & hormone (LH, FSH & testosterone/17β oestradiol) levels.
4. Updates should be communicated with the GP by the supervising Consultant following every clinic visit.

Specialist / Consultant Responsibilities:
1. To undertake necessary investigations to confirm a diagnosis of central precocious puberty that requires GnRH agonist treatment.
2. To arrange administration of the first injection in the hospital or under supervision of an endocrine nurse.
3. To provide GP with written information regarding the diagnosis and indication for GnRH therapy along with dosage, preparation used and frequency of injections.
4. To liaise with GP about local arrangements necessary for instigation of therapy and identify any possible barriers to treatment.
5. To monitor patient's growth, pubertal development, assessment of any other ongoing or evolving endocrinopathy and general condition at 3-6 monthly intervals following instigation of therapy and advise about change in dose, preparation or frequency of injections.
6. To supervise the timing of cessation of therapy based on patient's gender, age and other medical problems.

General Practitioner Responsibilities:
1. To prescribe GnRH agonists as advised by the supervising Consultant and, where local practice dictates, discuss with the local Prescribing Advisor; feedback to the Consultant any concerns regarding GnRH agonist prescribing and/or shared care.
2. To facilitate the administration of subsequent injections at the surgery as appropriate. The injections should not be delayed beyond the recommended time period for any reason, but can be brought forward by a few days if needed for practical or logistical reasons.
3. To monitor patient's overall health and well-being.

4. To report any adverse effects of therapy to the supervising Consultant or deputy.

Patient/Parent Responsibilities

1. To ensure they have clear understanding of the prescribed treatment.
2. To ensure that injections are administered as per the recommended time interval. Please notify the supervising Consultant and/or GP if the injection is delayed for any reason.
3. To share any concerns in relation to treatment with the supervising Consultant and/or GP.
4. To report any adverse effects to the supervising Consultant and/or GP whilst on treatment.

GP & Hospital Communication:

In case of concern regarding any aspect of a patient's care, please contact the supervising Consultant or deputy as soon as possible.

Name	Phone Number	Fax Number	Email address
Consultant:			
Specialist Nurse:			
Other			

Supporting information for Use of Gonadotrophin Releasing Hormone (GnRH) Agonists - Triptorelin

The salient features of the two preparations are as follows:

Salient features	Triptorelin 3.75 mg (Gonapeptyl Depot 3.75 mg)	Triptorelin 11.25 mg (Decapeptyl SR 11.25 mg)
Dose & injection frequency	3.75 mg every 3-4 weeks	11.25 mg every 10-12 weeks
Route of administration	Sub-cutaneous injection preferred. Can be given as an intra-muscular injection	Deep intra-muscular injection

It is important to ensure that the injections are given within the recommended time interval and any delay should be avoided. Pubertal suppression action of GnRH agonists may be lost if injections are unduly delayed and increases the incidence of adverse effects. The injection can be brought forward for a few days if required.

Manufacturer's recommended method of preparation and administration should be strictly followed; including advice that once prepared the injection should be used immediately. Reconstitution should only be done with the provided solution and needles should be changed for withdrawing the solution and giving the injection as per manufacturer's recommendations. Use of needles of a gauge narrower than those supplied by the manufacturer is not recommended as the needle may become blocked by the suspended particles of the prepared product.

Licensed Indications for GnRH agonist therapy

1. Central precocious puberty due to premature activation of the hypothalamic pituitary gonadal axis. This is generally idiopathic, but may occur as a result of intracranial tumours, following radiotherapy or in association with certain rare syndromes.
2. In cases where puberty needs to be delayed in order to maximise growth potential in growth hormone deficient children

Diagnostic Criteria for precocious puberty in Children

The diagnosis is based on a combination of the following:

1. Girls: Presence of pubic hair and/or breast development before 8 years
2. Boys: Presence of pubic hair and/or development of genitalia before 9 years
3. Rapid growth rate resulting in tall stature (for age & for parental heights)
4. Advanced skeletal maturation
5. Central cause of precocious puberty confirmed by pituitary function testing and/or cranial imaging.

Adverse Effects

Mild or moderate vaginal bleeding may occur in girls in the first month of treatment. Concurrent use of cyproterone acetate for the first 2 weeks can minimise the risk of vaginal bleeding. Other common adverse effects are injection site reactions and arthralgia.

Drugs that raise prolactin levels should not be prescribed concomitantly as they reduce the level of LHRH receptors in the pituitary.

Supporting information for Use of Gonadotrophin Releasing Hormone (GnRH) Agonists - Leuprorelin acetate

The salient features of the two preparations are as follows:

Salient features	Leuprorelin acetate 3.75mg (Prostap SR DCS 3.75mg)	Leuprorelin acetate 11.25mg (Prostap 3 DCS 11.25mg)
Dose & injection frequency	3.75mg monthly (depending on weight)	11.25mg 3 monthly (depending on weight)
Route of administration	Sub-cutaneous injection.	Sub-cutaneous injection.
Presentation, Reconstitution and injection	Dual chamber syringe and 23G needle for injection	Dual chamber syringe and 23G needle for injection

It is important to ensure that the injections are given within the recommended time interval and any delay should be avoided. Pubertal suppression action of GnRH agonists may be lost if injections are unduly delayed and increases the incidence of adverse effects. The injection can be brought forward for a few days if required (for full details see SmPC).

Manufacturer's recommended method of preparation and administration should be strictly followed; including advice that once prepared the injection should be used immediately.

Licensed Indications for GnRH agonist therapy Prostap SR DCS and Prostap 3 DCS

Treatment of central precocious puberty (girls under 9 years of age, boys under 10 years of age).

Adverse Effects

In the initial phase of therapy, a short-term increase as flare-up of the sex hormone level occurs, followed by a decrease to values within the pre-pubertal range. Due to this pharmacological effect, adverse events may occur particularly at the beginning of treatment.

Common adverse effects
emotional lability, headache, abdominal pain / abdominal cramps, nausea/vomiting, acne, vaginal haemorrhage, spotting, vaginal discharge, injection site reactions (for a full list see SmPC).

Reviewed by the BSPED Clinical Committee: April 2021