Health and Social Care Board

Interface Pharmacist Network Specialist Medicines

Liothyronine

Endocrinology Shared Care Guideline

Specialist Details	Patient Identifier
Name: _____	
Location: _____	
Tel: _____	**Date:** _____

Introduction

Indication: Management of hypothyroidism in combination with levothyroxine
The British Thyroid Association and the NI formulary do not support the routine use of oral liothyronine for the management of hypothyroidism. The British Thyroid Association suggests the following; 'Consider levothyroxine and liothyronine as an experimental approach in compliant levothyroxine treated hypothyroid patients who have persistent complaints despite serum TSH values within the reference range, provided they have previously been given support to deal with the chronic nature of their disease and associated autoimmune diseases have been ruled out.'

Indication: Management of hypothyroidism, in patients being treated for thyroid cancer, who have undergone thyroidectomy and are to receive radioiodine remnant ablation (RRA) or Iodine therapy
Liothyronine monotherapy is a treatment option and is usually taken for 2 weeks, 14 to 28 days prior to RRA or Iodine therapy. Rarely, it may be used long term in selected patients. Monitoring is not required and a standard dose of 20 microgram three times a day is given with no dose adjustments. Hence the advice contained within this guideline on monitoring and dose adjustments do not apply.

Adult Dosage and Administration

The specialist will advise on the dose regimen for each specific patient. As a guide if a decision is made to embark on a trial of liothyronine and levothyroxine combination therapy a suggested dose regimen is 1 microgram of liothyronine for every 13 to 20 micrograms of levothyroxine (British Thyroid Association), within the practical limits of the available dosage forms. If possible liothyronine should be given in 2 divided doses, before breakfast and before bed (which should ideally be the largest dose). Levothyroxine should continue to be given once a day, though a dose reduction may be required.

Monitoring Section
After initiation of therapy thyroid stimulating hormone (TSH), free T4 and free T3 should be monitored 6–8 weekly and the dose of liothyronine should be adjusted until a stable TSH is achieved, after which TSH can be checked 4–6 monthly, and then annually.

Available as: Liothyronine 20 microgram tablets, 5 microgram tablets (unlicensed)

Hospital Specialist Responsibilities

- Assess if the patient is suitable for treatment with liothyronine.
- Arrange shared care with the patient's GP.
- Carry out a baseline ECG if indicated.
- Provide patient/carer with information on use, side-effects and need for monitoring of medication.
- Advise GP of frequency of TSH, free T4 and free T3 monitoring.
- Adjust the dose where necessary and advise the GP accordingly.
- Review results of safety monitoring and request additional tests as required.
- Monitor response to treatment 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.
- Discontinue if no improvement after 3 months.

GP Responsibilities

- Prescribe liothyronine; continued prescribing is appropriate for patients attending regular review.
- Monitor TSH, free T4 and free T3 as advised by the specialist, ensuring practice systems are in place to recall patients for blood tests. Communicate results of monitoring to the specialist.
- 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

Contraindications include: Thyrotoxicosis

Caution advised with: Cardiovascular disorders, diabetes insipidus, diabetes mellitus, elderly, hypertension, long-standing hypothyroidism, myocardial infarction, myocardial insufficiency, pan hypopituitarism, predisposition to adrenal insufficiency.

Commonly reported side effects: Anginal pain; arrhythmias; diarrhoea; excitability; fever; flushing; headache; heat intolerance; hypersensitivity reactions; insomnia; muscle cramp; muscular weakness; oedema; palpitation; pruritus; rash; restlessness; sweating; tachycardia; tremor; vomiting; weight-loss.

Pre-existing cardiovascular disorders: If metabolism increases too rapidly (causing diarrhoea, nervousness, rapid pulse, insomnia, tremors and sometimes anginal pain where there is latent myocardial ischaemia), reduce dose or withhold for 1–2 days and start again at a lower dose.

Pregnancy: Not considered safe in pregnancy; seek specialist advice for the management of hypothyroidism.

Breast feeding: Considered safe in breastfeeding.

Common Drug Interactions

Use liothyronine with caution in association with: warfarin, phenindione and acenocoumarol (may enhance anticoagulant effect); amitriptyline, imipramine and possibly other tricyclic antidepressants (liothyronine may enhance their effect); carbamazepine, fosphenytoin, phenobarbital, phenytoin and primidone (may increase requirements for thyroid hormones in hypothyroidism); oestrogens, including the combined oral contraceptive (may increase requirements for thyroid hormones in hypothyroidism); amiodarone; digoxin (may require dose adjustment of digoxin).

Communication

For any queries relating to this patient's treatment with liothyronine, 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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