Prescribing Guidelines

Prescribing arrangement for the management of patients transferring from ***Secondary Care to Primary Care***

Liothyronine for a selected cohort of adults with Hypothyroidism

APC PG 038

For the latest information on interactions and adverse effects, always consult the latest version of the Summary of Product Characteristics (SPC), which can be found at: http://www.medicines.org.uk/

Approval and Authorisation

Approved by	Job Title	Date
BW Area Prescribing Committee	G Braham, Chair	May 2019
GP MOC	W Beecham, Chair	May 2019

Change History

Version	Date	Author	Reason
v.1.0	May 2019	A Scott	New document

This prescribing guideline remains open to review considering any new evidence.

This guideline should only be viewed online and will no longer be valid if printed off or saved locally

Principles of Prescribing Arrangement

These prescribing Guidelines are a local policy to enable General Practitioners to accept responsibility for the prescribing and monitoring of medicines, treatments or devices in primary care, in agreement with the initiating specialist service.

This guideline provides a framework for the seamless transfer of care for a person from a hospital or specialist service setting to general practice, where this is appropriate and in the patient's best interest. People should never be placed in a position where they are unable to obtain the medicines they need because of a lack of communication between primary and secondary care.

It is important to note, in line with the General Medical Council guidance on prescribing, doctors are responsible for prescriptions they sign, and their decisions and actions when they supply and administers medicines and devices; or authorise or instruct others to do so.

Transfer of care

Transfer of clinical responsibility to primary care should only be considered where the patient's clinical condition is stable or predictable.

Referral to the GP should only take place once the GP has agreed to this in **each individual case**, and the hospital or specialist will continue to provide prescriptions until a successful transfer of responsibilities. The GP should confirm the agreement and acceptance of the shared care prescribing arrangement and that supply arrangements have been finalised. The secondary care provider must supply an adequate amount of the medication to cover this transition period. The patient should then be informed to obtain further prescriptions from the GP.

Clinicians should clearly explain what a shared care arrangement means for the patient and why it might be an option in their case. The patient or their carers should have the opportunity to ask questions and explore other options if they don't feel confident that shared care will work for them. They should be fully involved in, and in agreement with, the decisions to move to a shared care model for their on-going care. **Importantly, patients should never be used as a conduit for informing the GP that the prescribing is to be transferred.**

Patient consent

The best interest, agreement and preferences of the patient should be at the centre of the decision to begin shared care and their wishes followed wherever possible. Patients should be able to decline shared care if, after due consideration of the options, they decide that it is not in their best interests. Involvement of carers may be critical, especially in circumstances when it is not possible for the patients to make a decision e.g. mental capacity; where appropriate they should be included in the discussion about shared care.

Indications

Combination levothyroxine / liothyronine should not be used *routinely* in the management of hypothyroidism as there is insufficient population based clinical evidence to show that combination therapy is superior to levothyroxine monotherapy. As part of the overall holistic management of patients with hypothyroidism, NHS consultant endocrinologists may start a trial of combination levothyroxine and liothyronine in circumstances where all other treatment options have been exhausted.

1. Where symptoms of hypothyroidism persist despite optimal dosage with levothyroxine. (TSH 0.4-1.5mU/L)
2. Where alternative causes of symptoms have been excluded, *see box 1 below.*

Principles of shared care

This shared care agreement outlines suggested ways in which the responsibilities for managing the prescribing of liothyronine can be shared between the consultant and general practitioner (GP). GPs are invited to participate. If the GP is not confident to undertake these roles, then he or she is under no obligation to do so. In such an event, the total clinical responsibility for the patient for the diagnosed condition remains with the consultant. If the consultant asks the GP to prescribe this drug, the GP must reply to this request as soon as practicable confirming whether or not they are happy to do so.

Sharing of care assumes communication between the consultant, GP and patient. The intention to share care should be explained to the patient by the doctor initiating treatment. It is important that patients are consulted about treatment and are in agreement with it.

Shared Care is only appropriate if it provides the optimum solution for the patient.

Exclusions

Patients with thyroid cancer who need liothyronine as part of their investigation and treatment will remain under the specialist care.

1. Women who are planning pregnancy who are taking liothyronine should remain under specialist care as it is not recommended in pregnancy.
2. In rare cases where liothyronine is used for resistant depression, therapy should be supervised by a consultant psychiatrist. *This is off licence and not approved locally.*

Dose and Response

Liothyronine is only prescribed as part of a combination treatment with levothyroxine

When liothyronine is commenced a reduction in levothyroxine dose will be required. Specialists should individualise approach to dose changes, however typically, for every 10microgram of liothyronine (half tablet of 20microgram preparation) the levothyroxine dose should be reduced by 50micrograms.
(E.g. levothyroxine 125microgram each morning would become 75microgram levothyroxine each morning and 10microgram liothyronine each morning).

Specialist Responsibilities

1. To ensure the patient fulfils the criteria for treatment.
2. To ensure that all alternative causes of symptoms have been excluded.
3. To prescribe, monitor and assess response biochemically and assess physical and psychological wellbeing after at least 3 months of treatment and until treatment dose is stabilised.

GP responsibilities

Key roles to be undertaken in primary care once a decision to work under shared care is made

1. To agree to prescribe liothyronine in line with the shared care guideline once a stable dosing regimen has been determined by specialist care.
2. Ensure no drug interactions with concomitant medicines that are added at a later time.
3. Monitor biochemistry periodically as recommended by the specialist.
4. Report to and seek advice from the specialist on any aspect of patient care, which is of concern and may affect treatment.
5. Report adverse events to the MHRA on a Yellow Card www.mhra.gov.uk/yellowcard and to the specialist.

Primary Care Monitoring

Initial biochemistry monitoring will be undertaken by the specialist until a regimen is established.

- Monitoring is by TSH levels measured from blood tests taken **prior** to the morning medication.
- Initially and following a dose change a repeat test will be required at 6-8weeks. After dose stabilisation, monitoring should only be required annually unless there is a change in symptoms that may warrant the checking of TSH levels.
- The aim of the treatment is to maintain TSH of 0.4-2.5mU/L with theT3 and T4 in the normal range.

Actions to be taken in response to monitoring

TSH Level	Action for GP
More than 5mU/L	Increase levothyroxine dose by 25 microgram
0.4 – 5.0 mU/L	No change required
Less than 0.4mU/L	Seek specialist advice, likely resume at lower dose

Contraindications

Liothyronine is contraindicated in: (Discuss with NHS Endocrinologist)

- Known hypersensitivity to the drug or any of its excipients
- Thyrotoxicosis
- Cardiac arrhythmias
- Angina
- Pregnancy

Cautions

Use with caution in patients with:

- Ischaemic heart disease: any new presentation or significant worsening of existing ischaemic heart disease should be discussed with the specialist endocrinology team.
- Breast feeding: an increase in monitoring of thyroid function tests may be required, discuss with specialist endocrinology team.

Important adverse effects and managements

Specialist to detail below the action to be taken upon occurrence of a particular adverse event as appropriate. Most serious toxicity is seen with long-term use and may therefore present first to GPs.

Adverse Event	Action to be taken	By whom
Angina, arrhythmia	Stop liothyronine, check TSH	GP
Palpitations, restlessness, tremor, diarrhoea, headache, muscle cramps	Continue liothyronine, check TSH	GP

Box 1: some possible causes of persistent symptoms in euthyroid patients on levothyroxine T4:

Endocrine / autoimmune	**Haematological**	**End organ damage**	**Nutritional**	**Metabolic**	**Drugs**	**Lifestyle**	**Other**
Diabetes mellitus Adrenal insufficiency Hypopituitarism Coeliac disease Pernicious anaemia	Anaemia Multiple myeloma	Chronic liver disease Chronic kidney disease Congestive cardiac failure	Deficiency of any of the following: Vitamin B12 Folate Vitamin D Iron	Obesity Hypercalcaemia Electrolyte imbalance	Beta-blockers Statins Opiates	Stressful life events Poor sleep pattern Work-related exhaustion Alcohol excess	Obstructive sleep apnoea Viral and postviral syndromes Chronic fatigue syndrome Carbon monoxide poisoning Depression and anxiety Polymyalgia rheumatic Fibromyalgia

Contact Information

Royal Berkshire Foundation Trust Hospital, 0118 322511	
Lead Consultant	Dr Ian Gallen/Dr Theingi Aung 01183227969
Lead Nurse	Violet Sanderson/Elizabeth Kasimba 01183228109
Medicines Information	0118 3227803

References

Based on RMOC guidance – Prescribing of liothyronine. November 2018

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2. British National Formulary January 2018.
3. Wiersinga W, M, Duntas L, Fadeyev V, Nygaard B, Vanderpump M, P, J, 2012 ETA Guidelines: The Use of L-T4 + L-T3 in the Treatment of Hypothyroidism. Eur Thyroid J 2012;1:55-71
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