Position statement on the prescribing of liothyronine in hypothyroidism, thyroid and parathyroid cancer and resistant depression in primary care

SW London CCGs do not support the *routine* primary care prescribing of liothyronine in **hypothyroidism,** in line with NHS England's national guidance on medicines which should not be routinely prescribed[1]:

- **New patients** – hospital only unless prescribed under a Shared Care Agreement (*in development*).
- **Existing patients** – to be reviewed by a NHS consultant endocrinologist. Prescriptions for individuals receiving liothyronine should continue until that review has taken place (*do not start to refer in to secondary care, unless clinically necessary, until a pathway has been agreed with local Trusts*)

Prescribing for the indications of **thyroid and parathyroid cancer** and **resistant depression** are **hospital only**. SW London CCGs **do not** support the prescribing of unlicensed thyroid extracts (e.g. Armour® Thyroid, ERFA thyroid), plus compounded thyroid hormones, iodine containing preparations, dietary supplementation for any indications.

Rationale

- Levothyroxine monotherapy is the NHS treatment of choice for primary hypothyroidism due to the overwhelming evidence to support this[2].
- NICE does not recommend the routine prescribing of liothyronine for primary hypothyroidism, either alone or in combination with levothyroxine, because there is not enough evidence that it offers benefits over levothyroxine monotherapy, and its long-term adverse effects are uncertain[3].
- NICE does not recommend prescribing natural thyroid extracts because there is not enough evidence that it offers benefits over levothyroxine, and its long-term adverse effects are uncertain[3].
- Liothyronine is **not routinely recommended for prescribing** as there are potential risks from taking liothyronine, such as atrial fibrillation and loss of bone strength which increases the risk of osteoporosis and fractures[2.] Its shorter half-life means that steady-state levels cannot be maintained with once daily dosing[2].
- The NHS Drug Tariff price of liothyronine has risen significantly[4] and there is currently insufficient evidence of clinical and cost effectiveness to support the use of liothyronine (either alone or in combination) for the treatment of hypothyroidism[2].
- The British Thyroid Association, in their 2015 position statement, state: 'There is no convincing evidence to support routine use of thyroid extracts, liothyronine monotherapy, compounded thyroid hormones, iodine containing preparations, dietary supplementation and over the counter preparations in the management of hypothyroidism'[4].
- The Regional Medicines Optimisation Committee (RMOC) recommends that 'strict criteria are applied to ensure that liothyronine is only prescribed in the situations where alternative treatments have been found to be inadequate. In such circumstances, this should be prescribed in accordance with a Shared Care Agreement. If a patient is initiated on treatment, prescribing responsibility should remain with the hospital consultant for at least 3 months'[2].
- Liothyronine used as part of the management of thyroid cancer, in preparation for radioiodine remnant ablation or radioiodine therapy, is usually for short term use and prescribing responsibility should be retained by the patient's specialist team [4].
- The South West London and St George's Mental Health Trust Mental Health Depression and Anxiety treatment guidelines state that liothyronine should not be prescribed for depression[5].

Guidance for Clinicians

1. **Prescribing of liothyronine in endocrinology: hypothyroidism**

- The prescribing of liothyronine is only supported if initiated by, or considered appropriate following a review by, a NHS consultant endocrinologist.
- **For new patients**, primary care prescribing of liothyronine should only be undertaken as part of a Shared Care Agreement after at least a 3-month review by a NHS consultant endocrinologist.
- Prescribers in primary care **should not** initiate liothyronine for any new patient.
- **Existing patients** should be reviewed by a NHS consultant endocrinologist.
- The withdrawal or adjustment of liothyronine treatment should also only be undertaken by, or with the oversight of, an NHS consultant endocrinologist. Where GPs are involved in such treatment changes, this should be with NHS consultant endocrinologist support.
- If a **previous** trial titration has proved unsuccessful, the NHS consultant endocrinologist should decide whether a further review is warranted and inform the GP accordingly.
- The NHS consultant endocrinologist must specifically define the reason if any patient currently taking liothyronine should not undergo a trial titration to levothyroxine monotherapy, and this must be communicated to the GP and recorded on the patients' medical record.

2. **Prescribing of liothyronine in oncology: thyroid and parathyroid disease**

- This indication is hospital only in SW London; primary care prescribers should not prescribe liothyronine for patients with thyroid or parathyroid cancer.
- Prescribing of liothyronine in thyroid cancer, where it is used as an adjuvant to radioactive iodine treatment, should only be addressed by specialists in secondary / tertiary care.
- Prescribing for patients should be retained by the specialist team involved in the management of the patient.
- Thyroid cancer patients who have completed their treatment usually need to take levothyroxine for life and should be managed in the same way as patients with hypothyroidism.

3. **Prescribing liothyronine in psychiatry: resistant depression**

- SW London CCGs and Trusts do not support the prescribing of liothyronine in the treatment of depression which is an unlicensed indication[5].
- All patients currently receiving liothyronine for depression should be referred to a NHS consultant psychiatrist to review the appropriateness of the treatment. A psychiatrist recommending ongoing treatment with liothyronine should provide a rationale and patients continuing to receive ongoing liothyronine should be overseen by a NHS consultant.
- Prescribing for patients should be retained by the specialist team involved in the management of the patient.

Guidance for patients, carers and guardians

- In accordance with NHS guidance on 'Defining the Boundaries between NHS and Private Healthcare', if you are currently obtaining supplies of liothyronine or desiccated thyroid via a private prescription, or you are self-funding, then **you are not eligible** to obtain liothyronine by a NHS prescription unless you meet the criteria set out in this position statement.
- If you have been seen by a private doctor, you can be referred to a private service to obtain a private prescription for your treatment.

For further information on the prescribing of liothyronine please refer to the full RMOC guidance.

References

1. **NHS England.** Items which should not routinely be prescribed in primary care: Guidance for CCGs. [Online] June 2019. https://www.england.nhs.uk/wp-content/uploads/2019/08/items-which-should-not-routinely-be-prescribed-in-primary-care-v2.1.pdf.

2. **Regional Medicines Optimisation Committee.** Prescribing of Liothyronine. *Specialist Pharmacy Service.* [Online] June 2019. https://www.sps.nhs.uk/wp-content/uploads/2019/07/RMOC-Liothyronine-guidance-V2.6-final-1.pdf.

3. **NICE NG145**. Thyroid disease: assessment and management. *NICE*. [Online] November 2019. https://www.nice.org.uk/guidance/ng145.

4. **PrescQIPP.** Bulletin 121: Liothyronine. [Online] February 2016. https://www.prescqipp.info/media/1423/b121-liothyronine-drop-list-22.pdf.

5. **South West London and St George's Mental Health NHS Trust.** [Online] July 2018. https://www.swlstg.nhs.uk/documents/related-documents/health-professionals/600-depression-and-anxiety-treatment-guidelines.