Trust Guideline for the Management of: Abnormal Pre-operativeThyroid Function Tests in Adults

For Use in:	Pre-op' assessment clinic
By:	Anaesthetists
For:	Abnormal Pre-op' Thyroid Function Test
Division responsible for document:	Medical Division
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If Yes - does the strategy/policy deviate from the recommendations of NICE? If so why?	N/A

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This guideline has been approved by the Trust's Clinical Guidelines Assessment Panel as an aid to the diagnosis and management of relevant patients and clinical circumstances. Not every patient or situation fits neatly into a standard guideline scenario and the guideline must be interpreted and applied in practice in the light of prevailing clinical circumstances, the diagnostic and treatment options available and the professional judgement, knowledge and expertise of relevant clinicians. It is advised that the rationale for any departure from relevant guidance should be documented in the patient's case notes.

The Trust's guidelines are made publicly available as part of the collective endeavour to continuously improve the quality of healthcare through sharing medical experience and knowledge. The Trust accepts no responsibility for any misunderstanding or misapplication of this document.

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Version and Document Control:

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3.2	10/06/2022	Document reviewed, no clinical changes.	Dr J Turner

This is a Controlled Document

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Quick reference guideline

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Objective/s

These guidelines have been developed to provide guidance on management of abnormal thyroid function test detected at pre-op' assessment and ensure consistency in thyroid disease management in patients undergoing non-thyroid surgery.

Rationale

Thyroid disease is a common condition with an insidious onset. It is prevalent in 3 -10% of the population and its frequency increases with age (1, 2). Women are more affected than men (3). These observations suggest that a significant number of patients undergoing surgery could have underlying thyroid disease.

There is no prospective double blinded study available to compare post-op' outcome in patients with hypothyroid disease to euthyroid patients, but there are case reports of exaggerated response to anaesthetic agents, intra operative hypotension and sudden development of circulatory failure in hypothyroid patients (4, 5).

Two retrospective studies examined the surgical outcome of hypothyroid patients comparing to euthyroid matched controls (6, 7). One of these revealed a higher risk of intra-operative complications with more intra-operative hypotension during non-cardiac surgery, and heart failure was encountered more frequently in cardiac surgery patients.

Furthermore, myxoedema coma can occasionally follow infection, surgery or anaesthesia in patients with longstanding untreated hypothyroidism. Although it is rare, it can be potentially fatal with mortality of 20 to 25% even with optimum therapy (8).

Hyperthyroidism is less common than hypothyroidism. The prevalence of hyperthyroidism in community-based studies has been estimated at 2% for women and less than 0.5% for men (9) with no relation to age in the likelihood of developing hyperthyroidism (10).

Patients with hyperthyroidism have increased cardiac output and are at increased risk of developing cardiac arrhythmias and true cardiomyopathy (11). Patients with hyperthyroidism also at risk of developing thyroid storm, which is a life-threatening medical emergency with high fatality rate up to 50% (12), and can be precipitated by thyroid and non-thyroid surgery, infection and acute iodine load e.g. contrast media.

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Broad recommendations

1. Despite the high prevalence of thyroid disease and in the absence of clinical suspicion, there is no need for routine preoperative thyroid screening.

2. Request thyroid profile on ICE by selecting miscellaneous tests, then pre op assessment clinic, then thyroid function (pre op). This will enable free T4 to be also checked from same sample if TSH is outside acceptable range.

3. Confirmed hypothyroidism (TSH > 4 mIU/L and fT4 < 9 pmol/L) has to be treated before any planned surgery, please ask GP to adjust thyroxine dose accordingly.

4. Confirmed hyperthyroidism (TSH<0.01 mIU/L and fT4> 21 pmol/L) has to be treated before any planned surgery. Please ask GP to adjust treatment or refer to endocrinology.

5. Patients with abnormal TFTs requiring emergency surgery should be discussed with endocrinology.

6. Iodinated contrast media should be avoided in patients with known thyroid abnormalities.

Clinical audit standards

After 1 year of implementation, the number of patients whose management has been concordant with the protocol can be audited. The audit standard is 100% adherence to the protocol.

Summary of development and consultation process undertaken before registration and dissemination

The authors listed above drafted this guideline on behalf of the Directorate of Endocrinology, which has agreed the final content at a clinical governance meeting. During its development it has been circulated for comment to all consultants and specialist endocrine nurses in the endocrinology directorate, Dr Javier Gomez from chemical pathology and members of the anaesthetic directorate via Dr Anna Lipp.

This version has been endorsed by the Clinical Guidelines Assessment Panel.

Distribution list/ dissemination method

Trust Intranet

Trust Guideline for the Management of: Abnormal Pre-operativeThyroid Function Tests in Adults

References/ source documents

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