CLINICAL PRACTICE: Cautionary tale

An unusual presentation of hypothyroidism

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Case history

Mrs J S, a 75 year old woman, presented with rectal bleeding associated with constipation, occurring for three weeks. She was otherwise asymptomatic. Her appetite was good and there was no history of recent weight loss or gain. She had a past history of irritable bowel syndrome, but constipation had not been a feature of her symptomatology. General and abdominal examinations were unrevealing. On rectal examination, small prolapsed haemorrhoids were seen but no lesions were palpable.

Investigations

Full blood examination: Hb 13.3 g/dL

Erythrocyte sedimentation rate: 25 mm/hr

Urea, electrolytes, creatinine: normal

Liver function tests: normal

Carcinoembryonic antigen <2 µg/L (normal up to 4 µg/L)

Thyroid stimulating hormone level: markedly raised at 159.2 mu/L

Free thyroxine level (T4): markedly reduced at 2.1 pmol/L (normal 10–24 pmol/L)

Thyroid peroxidase antibodies: 11 iu/mL (normal <50 iu/mL)

Colonoscopy: normal

Mrs J S was commenced on thyroxine 25 µg per day increased two weeks later to 50 µg. She felt better almost immediately after starting thyroxine and realised that she had been feeling generally unwell over recent months. Her constipation completely resolved. The dose of thyroxine was further increased three weeks later to 100 µg per day. There was no further rectal bleeding.

Commentary

In this case the only presenting symptom of hypothyroidism was constipation, causing haemorrhoids and hence rectal bleeding. In elderly patients in particular, nonspecific symptoms such as tiredness, may be attributed by patient and doctor alike, to 'normal aging'.

Hypothyroidism is a treatable condition not uncommonly encountered in general practice. It is important to clinch the diagnosis early because treatment can often significantly improve the quality of life and reduce the likelihood of secondary complications.

Presenting symptoms of hypothyroidism in adults include weight gain, tiredness, intolerance to cold, constipation, menstrual irregularities (menorrhagia, oligomenorrhoea or amenorrhoea) and angina. Examination of a patient with hypothyroidism could reveal any of the following features:

- cold hands and feet
- dryness of skin
- nonpitting oedema (which is due to infiltration of tissues with mucopolysaccharides)
- loss of eyebrow hair
- periorbital oedema, and
- anaemia.

Examination of the cardiovascular system may reveal bradycardia, and pleural or pericardial effusion. In elderly patients, hypothyroidism may present with hypothermia. There may be evidence of proximal myopathy and on testing the tendon reflexes one may be able to detect delayed relaxation phase. There may be evidence of carpel tunnel compression in some cases of hypothyroidism. In cases of severe untreated hypothyroidism there may be loss of consciousness leading to the so-called 'myxoedema coma' which is only rarely encountered nowadays. Depression and psychosis (myxoedema madness) are recognised features of hypothyroidism. Hypothyroidism can also be associated with other autoimmune diseases such as pernicious anaemia, diabetes mellitus and vitiligo.

Conclusion

Hypothyroidism can present with a wide range of clinical features and sometimes none (biochemical diagnosis). It is important to consider the diagnosis in a broad range of clinical presentations and have a high index of suspicion in elderly women and others at increased risk.

Hypothyroidism – a case for case finding

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Commentary

Dr Panjwani's case report reminds us that hypothyroidism is common in our older population (particularly in women) and that symptoms are nonspecific and usually dismissed as 'old age'. Hypothyroidism becomes increasingly common in older people of Anglo-Celtic descent and is significantly higher in women; at 65–75 years of age some 10–15% of women have hypothyroidism compared to 2–3% of men.[1]

A personal history of thyroid disease and certain medications further increase the likelihood of thyroid disease (Table 1). Previous thyroid disease may be an indicator of an autoimmune process, often associated with antibodies (antithyroid peroxidase) where gradual destruction of the thyroid takes place (eg. Graves disease, some cases of thyroiditis). Other autoimmune diseases are also associated with an increased risk, particularly type 1 diabetes and pernicious anaemia but also nonendocrine autoimmune diseases such as rheumatoid arthritis.[2] In some patients with thyroid disease treatment causes ongoing destruction long after administration (eg. radioactive iodine). Medications may affect the hypothalamic pituitary thyroid axis and/or interfere with thyroid hormone synthesis and/or release. A recent report has suggested that iodine deficiency may now be contributing to thyroid disease (goitre and the potential of hypothyroidism) because of the decreased amount of iodine in staple foodstuffs.[3]

Symptoms attributable to hypothyroidism in the case reported are nonspecific: constipation and, in retrospect, perhaps of generally not feeling well. Other symptoms of hypothyroidism (Table 2) are also nonspecific and are often associated with increasing age. Biochemical abnormalities occur, notably hypocholesterolaemia and enzyme changes (eg. creatine kinase). However, the diagnosis of hypothyroidism may require a case finding approach in high risk groups such as:

- older women
- patients with a past history of thyroid disease
- patients on medication such as amiodarone
- patients with hypercholesterolaemia, and
- patients with autoimmune disorders.

Checking thyroid stimulating hormone is the appropriate initial investigation unless there is reason to suspect hypothalamic pituitary dysfunction in which case a free thyroxine level (Free T4) should be requested. In patients with a past history of autoimmune disease the presence of a high titre of thyroid antibodies (antithyroid peroxidase) indicates the likelihood of future hypothyroidism and justifies regular checks (eg. 1–2 per year). Other investigations are not indicated (radio nuclide scanning, ultrasound).

Another group of patients where a high index of suspicion should be maintained is pregnant women (or those planning pregnancy) with a history of autoimmune disease. Hypothyroidism may be asymptomatic and undetected during pregnancy. It is associated with decreased fertility, ill effects in 20–40% of pregnancies (including spontaneous abortion, pre-eclamptic toxaemia and postpartum haemorrhage) and potentially reduces the intelligence of the baby.[4] In these women a check before pregnancy is indicated, and further checks are required during pregnancy since thyroxine requirements increase during pregnancy.

Treatment of asymptomatic hypothyroidism is clearly beneficial in pregnant women but is also associated with improved quality of life in other groups and there is some evidence of lesser medical morbidity as well. Many believe there is a case for thyroid screening in high risk groups.

Table 1. Predisposition to hypothyroidism

Past history of thyroid disease

Autoimmune	Goitrous
Graves disease	Toxic multinodular goitre
Thyroiditis	Multinodular goitre

Medications

CVD	CNS	IMMUNE
Amiodarone	Dopamine	Glucocorticoids
High dose frusemide	Phenytoin	

Other autoimmune diseases

Endocrine	Nonendocrine
Type 1 diabetes	Rheumatoid arthritis
Pernicious anaemia	SLE

Table 2. Symptoms of hypothyroidism

Central nervous system
Tiredness, lethargy, loss of energy, deafness

Metabolic
Weight gain, cold intolerance

Cosmetic
Dry and thickened skin and hair

Gastrointestinal
Constipation

Musculoskeletal
Stiffness, aches and pains

References

1. Phillips P J. Thyroid case finding. Curr Ther 2001(1):21–25.
2. Tunbridge W M G. The spectrum of thyroid disease in the community: The Whickham Study. Clin Endocrin 1977; 7:481–93.
3. Mortimer R H. Thyroid diseases in pregnancy. Aust N Z J Med 1998; 28:647–653.
4. Hetzel B S. Dietary defiency and brain development. Med J Aust 1980; 1(8):349.

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