The lesson from a yellow psychotic patient

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INTRODUCTION

The importance of a thorough physical examination in patients with psychiatric manifestations is highlighted in this interesting case. Although the presentation is by no means common, a missed diagnosis could potentially lead to a fatal outcome in what is otherwise an eminently treatable condition.

CASE REPORT

A 28-year-old Caucasian male professional was referred to the psychiatric services as an emergency by his GP for unusual behaviour. When assessed by the junior doctor on call, he came across as being deluded and psychotic. The patient had been found roaming in the garden half dressed, searching for a 'spy plane' that was observing him and sending him 'messages'. He also reported picking up messages from objects around him and was certain that his phone was being tapped by his managers at work. His wife, who held a busy job herself, mentioned that his behaviour had changed over the preceding 6 months and that he seemed 'odd at times' but was unable to give a clear description of the changes. He had not had any similar problems previously and there was no family history of a mental illness. A provisional diagnosis of a psychotic illness was made and the gentleman was admitted for further assessment and treatment. His physical examination was deemed unremarkable by the admitting doctor, but routine samples for biochemistry were sent off.

His mental state examination revealed a tidy appearance and slow, monotonous speech with long pauses before answering. There were no signs of depression although he appeared quite irritable at times. He was preoccupied with the paranoid thoughts of being constantly observed and denied hallucinations in any modality. He was well orientated but lacking insight into his illness and did not feel the need to be admitted into hospital.

On receipt of his blood reports the following day, a series of biochemical abnormalities were highlighted and further tests were requested. Investigations revealed a thyroid-stimulating hormone level of over 75mU/litre, free thyroxine of less than 4 pmol/litre, and raised aspartate transaminase and creatinine levels. The serum bilirubin level was within normal limits. These results were consistent with a diagnosis of myxoedema or hypothyroidism. Electrocardiogram (ECG) and chest X-ray findings were consistent with hypothyroidism, no antibodies to the thyroid gland were found and his peripheral blood picture was unremarkable.

On physical re-examination of the gentleman by the team doctor, the classical clinical picture of myxoedema was evident. The skin colour was markedly yellow secondary to the hypercarotenaemia but there was no conjunctival icterus. Puffy facial features, thick coarse skin with dry scalp hair, macroglossia, bradycardia and slow relaxation of deep tendon reflexes completed the picture.

He was started on thyroxine replacement therapy under the guidance of an endocrinologist, given that his ECG revealed low voltage waves, with T-wave flattening and a first-degree heart block. Rapid replacement of thyroxine is well known to aggravate cardiac problems such as congestive cardiac failure or angina pectoris.

The endocrinologist initiated therapy with thyroxine 25 μg and titrated upwards to achieve 150 μg at 6 weeks. No further increases in thyroxine were made in view of the marked clinical improvement and the biochemical parameters returning to near normal. Risperidone, an atypical antipsychotic, was simultaneously initiated to control the psychotic symptoms. Following initiation of treatment, he made a good recovery with regards to his mental and physical symptoms and was discharged with outpatient follow-up. After a period of 2 months, his risperidone was tailed off, with no recurrence of symptoms. After further follow-ups at outpatient clinic for 6 months, he was discharged from specialist psychiatric care. He continued to see the endocrinologist for monitoring of his endocrine state.

DISCUSSION

Hypothyroidism is the endocrine disorder most commonly associated with psychiatric symptoms (Josephson and Mackenzie, 1980). According to the literature about 75% of hypothyroid patients suffer from depression, anxiety and neurotic symptoms and about one third suffer from hallucinations (Schofield and Bracken, 1983). Hypothyroidism presenting with psychotic symptoms has never been common, with only 150 cases estimated (Schofield and Bracken, 1983).

Research has indicated that routine investigations for thyroid disease in patients with psychiatric symptoms, revealed problems in about 3% of the

TABLE 1. Common clinical features of hypothyroidism

Symptoms	Often asymptomatic – often referred by family members/carers
	Significant increase in weight
	Lethargy
	Somnolence
	Irregular menstrual pattern, often menorrhagia
	Constipation
	Increased sensitivity to cold
Signs	'Myxoedemic facies' – puffy dry skin, sparse, brittle and coarse dry hair, macroglossia with papillary atrophy, may have loss of hair in lateral third of eye brows and icterus
	Hoarseness of voice
	Non-pitting type of oedema
	Bradycardia
	Slowing of the relaxation phase of tendon reflexes
	May have signs of pericardial, pleural effusion or ascites

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patients (Ryan et al, 1994). However, some other studies have returned figures closer to 13.7% for thyroid abnormalities (Enns et al, 1992) and therefore a high index of suspicion is required for diagnosis, as thyroid function tests are not done routinely in primary care and in some specialist centres.

CONCLUSIONS

Hypothyroidism is more likely to be suspected and detected in patients with physical symptoms and with a physical manifestation of the illness. Psychiatric symptoms with an organic aetiology and an insidious onset are liable to be missed unless there is a high index of suspicion and a thorough physical examination is carried out in every patient with psychiatric symptoms.

Given the pressure on time in most service settings, the possibility of an organic disorder manifesting with psychiatric symptoms needs to be at the forefront of every clinician's mind. The common clinical manifestations of hypothyroidism are summarized in *Table 1*. HM

Enns M, Ross C, Clark P (1992) Thyroid screening tests in psychiatric inpatients. *Gen Hosp Psych* **14**(5): 334–9

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Ryan WG, Roddam RF, Grizzle WE (1994) Thyroid function screening in newly admitted psychiatric inpatients. *Ann Clin Psych* **6**(1): 7–12

Schofield A, Bracken P (1983) Thyroid-induced psychosis in myxoedema. *Irish Med J* **76**(12): 495–6