Case Report

Catatonia and Psychosis Associated With Hyperthyroidism

Hadley W. Ressler, BA; Kaushal Shah, MD; Taylor Quattlebaum, MD; and Sahil Munjal, MD

yperthyroidism can result in various neuropsychiatric symptoms, including anxiety, depression, mania, and psychosis.1 A rare manifestation of hyperthyroidism is catatonia. Catatonia is a psychomotor syndrome characterized by immobility, mutism, and rigidity.^{1,2} It is commonly associated with schizophrenia but may be seen in other psychiatric disorders.1 The evidence of catatonia due to hyperthyroidism in the literature is sparse, and no cases have been reported in which a patient had no prior psychiatric history.^{3,4} Here, we present a case of catatonia and psychosis resulting from hyperthyroidism in a woman with no previous psychiatric history.

Case Report

A 37-year-old woman with a past medical history of hyperthyroidism presented to the emergency department with acute psychosis. She had no past psychiatric history except for a new diagnosis of hyperthyroidinduced psychosis from 1 month prior due to symptoms of paranoia and auditory hallucinations along with elevated free T₄ and decreased thyroidstimulating hormone (TSH). Her symptoms improved after taking oral methimazole 40 mg daily. However, after lowering her methimazole dose to 20 mg daily, she had a resurgence of symptoms, which brought her back to the hospital. On arrival, she was tearful and worried that people were trying to kill her. Thyroid function tests showed elevated free T_4 and undetectable TSH. Thyroid measurements are included in Table 1. The patient was admitted and was found to have abnormal hemoglobin level due to thalassemia, along with hyperkalemia

(serum potassium level = 5.5 mmol/L) and hyponatremia (blood sodium level = 132 mEq/L). Hyperkalemia and hyponatremia were resolved by hospital day 2. Subsequent complete blood count, comprehensive metabolic panel, urinalysis, electrocardiogram, and electroencephalogram were found to be unremarkable.

Psychiatric consultation was made on hospital day 4 when psychotic symptoms were not improving despite an increased methimazole dose (40 mg orally twice daily). On assessment, the patient had a flat affect, was unresponsive to questions, and did not follow commands. She denied family history of psychiatric disease or suicide attempts. Catatonia was confirmed by a Bush Francis Catatonia Scale (BFCS)² rating of 14 (scale range, 0-69) and a positive lorazepam challenge. She was prescribed intravenous (IV) lorazepam 1 mg 4 times daily for catatonia. For psychosis, she was initiated on olanzapine 5 mg orally at bedtime, which was titrated to 10 mg. The patient's free T₄ level was decreased by hospital day 7. On hospital day 12, lorazepam was titrated to a daily dose of 12 mg, and she had a BFCS rating of 1. On hospital day 14, the

patient reported suicidal ideation and was admitted to the psychiatric inpatient unit. She was given fluoxetine 20 mg, and lorazepam was tapered to 2 mg orally 3 times daily. On hospital day 22, the patient was discharged with a BFCS rating of 0, no suicidal ideation, and no psychotic symptoms noted or endorsed. Final drug prescriptions at discharge were methimazole 10 mg daily, olanzapine 10 mg at bedtime, lorazepam 2 mg 3 times daily, and fluoxetine 20 mg daily.

Discussion

Hyperthyroid-induced catatonia has been previously reported but is exceedingly rare.3 The BFCS, established in 1996, is a 23-point scale and can be used to diagnose catatonia as a distinct neuropsychiatric syndrome.2 According to DSM-5 criteria, the presence of at least 3 of the following 12 potential symptoms is required to diagnose catatonia: stupor, catalepsy, waxy flexibility, mutism, negativism, posturing, mannerism, stereotypy, agitation, grimacing, echolalia, and echopraxia.^{2,5} The sudden onset or rapid worsening of these symptoms and positive lorazepam challenge

Table 1.

Serum TSH, Free T₄, and Total T₃ Levels Throughout the Hospital Stay

Time of Measurement	TSH (0.35–4.5 ng/dLª)	Free T ₄ (0.6–1.4 ng/dL ^a)	Total T ₃ (62–194 ng/dLª)
Day prior to admission/ED	<0.010 ng/dL	2.75 ng/dL	
Day 3		2.9 ng/dL	248 ng/dL
Day 7		1.7 ng/dL	70 ng/dL
Day 16		0.7 ng/dL	132 ng/dL

Reference range.

Abbreviations: ED = emergency department, TSH = thyroid-stimulating hormone.

test are essential components of the diagnosis.^{5,6} Reports of catatonia or worsening psychiatric symptoms in thyrotoxicosis have been previously reported, but in our case, there was no prior psychiatric history.³ The association between hyperthyroidism and catatonia is significant in the primary care setting, as it may direct the treatment of hyperthyroidism.^{3,4} This case demonstrates the persistence of psychosis and catatonia beyond the stabilization of thyroid hormones, which is consistent with a prior report by Iskandar et al.³ In our experience, combination drug therapy with olanzapine, fluoxetine, and lorazepam stabilized the patient's psychosis and catatonia. Data on the long-term recurrence of psychiatric symptoms induced by hyperthyroidism are limited, and our patient was unfortunately lost to follow-up. This case highlights the rare psychiatric manifestations of hyperthyroidism, including catatonia

and psychosis. Clinicians must be mindful of early detection of hyperthyroid-induced catatonia, treatment considerations, and clinical course in these cases.

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Author Affiliations: Department of Psychiatry, Wake Forest School of Medicine, Winston-Salem, North Carolina (all authors).

Corresponding Author: Hadley W. Ressler, BA, Wake Forest School of Medicine, 475 Vine St, Winston-Salem, NC 27101 (hwalsh@wakehealth. edu).

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