International Journal of Medicine Research
www.medicinesjournal.com
ISSN: 2455-7404
Received: 25-01-2026, Accepted: 24-02-2026, Published: 11-03-2026
Volume 11, Issue 1, 2026, Page No. 61-62

Severe autoimmune hypothyroidism presenting as psychosis: A case report

Dr. Chinta Vempa Reddy[1], Dr. C Ramachandra Bhat[2]
[1] Junior Resident, Department of General Medicine, KVG Medical College and Hospital, Sullia, Dakshina Kannada, Karnataka, India
[2] Professor, Department of General Medicine, KVG Medical College and Hospital, Sullia, Dakshina Kannada, Karnataka, India

Abstract
Background: Hypothyroidism is a common endocrine disorder that can manifest with multisystem involvement.
Neuropsychiatric manifestations are well recognized; however, frank psychosis due to hypothyroidism, known as myxedema psychosis, is rare. Because psychiatric symptoms may dominate the clinical presentation, the underlying endocrine disorder may remain undiagnosed for prolonged periods.
Case Presentation: We report the case of a 35-year-old female who presented with suspicious behaviour for nearly 6–7 years, with significant worsening over the previous 4–5 months. She developed auditory hallucinations, persecutory and infidelity delusions, low mood, and progressive social withdrawal. There was no history of substance abuse, seizures, or neurological illness. Physical examination revealed pallor with stable vital signs. Mental status examination showed psychomotor retardation, reduced speech output, dysphoric affect, and second-person auditory hallucinations with preserved orientation. Laboratory investigations revealed markedly elevated thyroid-stimulating hormone (>100 µIU/mL) with low serum T3 and T4 levels. Anti-thyroid peroxidase antibodies were markedly elevated, and ultrasonography of the neck demonstrated diffuse thyroiditis, suggestive of Hashimoto's thyroiditis. Hemoglobin was 8.3 g/dL with low ferritin levels consistent with iron deficiency anemia. Other routine investigations were within normal limits.
Management and Outcome: A diagnosis of psychotic disorder secondary to severe autoimmune hypothyroidism was established. The patient was treated with levothyroxine replacement therapy along with risperidone for psychotic symptoms and oral iron supplementation. At three-month follow-up, there was marked clinical improvement with resolution of hallucinations and significant improvement in mood, insight, and daily functioning. Improvement in psychiatric symptoms paralleled normalization of thyroid function tests. Conclusion:
This case highlights the importance of considering endocrine causes in patients presenting with psychosis. Thyroid function testing should be routinely performed in psychiatric evaluations, as prompt recognition and treatment of hypothyroidism can lead to complete reversal of psychiatric manifestations.

Keywords: Myxedema psychosis, hypothyroidism, Hashimoto thyroiditis, secondary psychosis, neuropsychiatric manifestations, autoimmune thyroid disease

Introduction

Hypothyroidism is a common endocrine disorder characterized by deficiency of thyroid hormone leading to generalized metabolic slowing. The prevalence of hypothyroidism is increasing worldwide and is particularly common in women. The clinical manifestations range from fatigue, weight gain, cold intolerance, and constipation to severe systemic complications such as myxedema coma. In addition to physical symptoms, hypothyroidism can produce a wide spectrum of neuropsychiatric manifestations including depression, cognitive impairment, mood disturbances, and rarely psychosis.

Psychosis associated with hypothyroidism is traditionally referred to as myxedema psychosis or myxedema madness. Although the association between thyroid dysfunction and psychiatric illness has long been recognized, overt psychosis is an uncommon presentation and may result in diagnostic confusion. Psychiatric symptoms may precede classical signs of hypothyroidism, leading to misdiagnosis as primary psychiatric illness.

Autoimmune thyroiditis, particularly Hashimoto's thyroiditis, is the most common cause of hypothyroidism in iodine-sufficient regions. It is characterized by lymphocytic infiltration of the thyroid gland and the presence of anti-thyroid antibodies, most commonly anti-thyroid peroxidase (anti-TPO) antibodies.

We report a case of severe autoimmune hypothyroidism presenting predominantly with psychotic symptoms, emphasizing the importance of screening for thyroid dysfunction in patients with atypical psychiatric presentations.

Case Presentation

A 35-year-old female presented with behavioural changes characterized by suspiciousness and interpersonal conflicts for approximately six to seven years. Over the previous four to five months, her symptoms had worsened significantly. She began experiencing auditory hallucinations, hearing voices commenting on her actions. She also developed delusions of persecution and infidelity, frequently accusing family members without evidence. These symptoms were accompanied by low mood, reduced social interaction, and progressive functional decline.

There was no history of alcohol or substance use, head injury, seizures, or other neurological disorders. She had previously received intermittent psychiatric treatment but discontinued medications nearly one year prior to presentation.

On physical examination, the patient appeared pale but hemodynamically stable. No focal neurological deficits were noted. Mental status examination revealed psychomotor retardation, reduced speech output, dysphoric affect, and second-person auditory hallucinations. Orientation to time, place, and person was intact.

Laboratory investigations revealed markedly elevated thyroid-stimulating hormone (>100 µIU/mL) with low T3 and T4 levels, consistent with severe hypothyroidism. Anti-thyroid peroxidase antibodies were significantly elevated. Ultrasonography of the neck demonstrated diffuse thyroiditis, suggestive of autoimmune thyroid disease. Hemoglobin level was 8.3 g/dL, and serum ferritin was reduced, indicating iron deficiency anemia. Other routine laboratory investigations were within normal limits.

Based on clinical findings and investigations, a diagnosis of psychotic disorder secondary to severe autoimmune hypothyroidism (Hashimoto's thyroiditis) with associated iron deficiency anemia was made.

Treatment and Outcome

The patient was started on levothyroxine replacement therapy with gradual dose titration. Risperidone was initiated to control psychotic symptoms, and oral iron supplementation was prescribed to treat anemia. Supportive counselling and psychosocial support were also provided.

At three-month follow-up, the patient demonstrated significant clinical improvement. Auditory hallucinations had resolved, delusional beliefs had diminished, and her mood and social functioning had improved considerably. Thyroid function tests also showed improvement, supporting the diagnosis of psychosis secondary to hypothyroidism.

Discussion

Thyroid hormones play a crucial role in central nervous system function, influencing neuronal metabolism, neurotransmitter regulation, and cerebral blood flow. Deficiency of thyroid hormones may alter dopaminergic and serotonergic neurotransmission, contributing to psychiatric manifestations.

Psychosis associated with hypothyroidism is rare but well documented. Symptoms may include hallucinations, delusions, cognitive impairment, and mood disturbances. The exact mechanism remains unclear but may involve metabolic slowing, neurotransmitter imbalance, and autoimmune mechanisms.

Hashimoto's thyroiditis is the most common cause of hypothyroidism in adults. The presence of anti-TPO antibodies and diffuse thyroiditis on ultrasonography supports an autoimmune etiology. Importantly, psychiatric symptoms often improve significantly following thyroid hormone replacement.

This case emphasizes that thyroid function testing should be part of the routine evaluation of patients presenting with psychosis, particularly when the clinical presentation is atypical or resistant to psychiatric treatment.

Conclusion

Severe autoimmune hypothyroidism can rarely present as psychosis without prominent systemic symptoms. Early recognition and prompt thyroid hormone replacement can lead to significant improvement and prevent misdiagnosis as primary psychiatric illness. Routine screening for thyroid dysfunction is essential in patients presenting with new-onset psychosis.

References

1. Jameson JL, Fauci AS, Kasper DL, Hauser SL, Longo DL, Loscalzo J, *et al*. Harrison's Principles of Internal Medicine. 21st ed. New York: McGraw-Hill, 2022.
2. Bunevicius R, Prange AJ. Psychiatric manifestations of Graves' hyperthyroidism and hypothyroidism. Psychiatr Clin North Am,2010:33(2):309-322.
3. Heinrich TW, Grahm G. Hypothyroidism presenting as psychosis: myxedema madness revisited. Prim Care Companion J Clin Psychiatry,2003:5(6):260-266.
4. Kumar N, Singh P, Bhansali A. Myxedema psychosis: a rare presentation of hypothyroidism. Indian J Endocrinol Metab,2013:17(Suppl 1):S263-S265.
5. Hage MP, Azar ST. The link between thyroid function and depression. J Thyroid Res,2012:2012:590648.