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Case Report

Depression with Generalised Anxiety Disorder (GAD)



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	Abstract
Published on: 20.12.25	A case of 38-year-old woman who had a history of hypothyroidism and was receiving regular treatment reported feeling depressed and persistent sadness from three months. She was presented with associated symptoms of fatigue, lack of interest in everyday activities, insomnia, concentration problems, palpitations, and restlessness. Depression was confirmed by laboratory tests and clinical evaluation, and it later developed into generalized anxiety disorder (GAD). To find and treat possible causes of her anxiety symptoms, supportive care and management techniques were started. This case highlights the connection between hypothyroidism and mood disorders, showing how endocrine comorbidities can make people more vulnerable to anxiety and depression. Improving patient outcomes in these situations requires early detection and integrated management.
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Keywords: Depression, Generalized Anxiety Disorder, Hypothyroidism, Comorbidity, Fatigue, Mood Disorder, and Supportive Care.	

INTRODUCTION:

Combining depression with generalized anxiety disorder is one of the most prevalent mental illnesses. Up to 20% of adults are impacted annually. In addition to depressive symptoms like fear, a persistent sense of overwhelm, fatigue, cognitive impairment, and anhedonia. The main characteristic feature of generalized anxiety disorders excessive worry and reports persistent presence of sadness, anxiety and worry [1][2][3]. Excessive, irrational, and ongoing worry about commonplace problems is the hallmark of generalized anxiety disorder. This concern may be complex, involving issues related to finances, family, health, and the future. It is severe, challenging to manage, and frequently accompanied by a variety of confusing psychological and

physical symptoms. People frequently have symptoms like restlessness, insomnia, and difficulty concentrating, which can worsen both conditions and result in increased functional impairment, a worse prognosis, and a decreased response to treatment. Excessive uncontrollable worry that occurs more overlapping often than not for at least six months, along with sleep disturbances, tense muscles, and irritability, are the hallmarks of generalized anxiety disorder. When depression and GAD coexist, a significant depressive episode that satisfies DSM-5 criteria is present [4, 5, 6, 7, 8].

CASE PRESENTATION:

A 38 years old female patient with a known case of Hypothyroidism (under treatment); reported to the psychiatric department with the chief complaints of persistent sadness and low mood for three months, fatigue, insomnia, palpitations, restlessness, loss of daily activities along with concentration. Previously, she was on medication with levothyroxine [50 mcg] to treat hypothyroidism.

She had a familiar history of mother with major depressive disorder and a social history of married housewife, moderate stress due to family issues. All the vital were found to be within the normal ranges except with elevation of T3 levels which is given in detail in the following table.

DETAILED LABORATORY INVESTIGATIONS IN CASE REPORT:

Complete Blood Picture	Normal Ranges	Values
Hb	(12-15g/dl)	12.8
RBC	(4.2-6.1mcells/mm ³)	5.1
WBC	(45000-10000cells/mm ³)	7200
ESR	(Female-0-20mm/hour)	12
Platelet count	(1.5-4.5laks/mm ³)	3.6

Hb: Haemoglobin, RBC: Red blood cells, WBC: White blood cells, ESR: Erythrocyte sedimentation rate

Thyroid function test	Normal range	Values
T3(ng/dl)	60-181	102
T4(ug/dl)	7.3-15	8.5
TSH(mI u/l)	0.55-4.78	3.2

T3: Triiodothyroxine, T4: Thyroxine, TSH: Thyroid stimulating hormone.

TREATMENT CHART:

S. No.	Trade name	Generic name	Dose/Roa	Frequency	Indications
1	LEXAPRO	Escitalopram	10 mg/ PO	OD	To treat depression
2	RIVOTRIL	Clonazepam	0.25 mg/ PO	HS	To treat panic disorder
3	LEVOXYL	Levothyroxine	50 ug / PO	OD	To treat bipolar depression
4	BUSPIN-10	Buspirone	10 mg/ PO	TID	To treat depression
5	TRAZALON-50	Trazodone	50mg/ PO	HS	To treat & improve sleep and depression
6	ATARAX-SR	Hydroxyzine	25-50 mg/ P/O	QID	To treat anxiety

PO:Per Oral, OD:Once a day, HS:Nighttime, TID:Thrice a day, QID: Fourtimes a day.

DISCUSSION:

Patient with persistent sadness, low mood, exhaustion, loss of interest in daily activities, insomnia, palpitations, and restlessness for the previous three months were frequently diagnosed with depression and generalized anxiety disorder. A final diagnosis of depression with generalized anxiety disorder (GAD) was made based on the clinical picture.

Because of her prior history of hypothyroidism, the patient's thyroid function test revealed abnormal T3

levels, which are clinically significant. Psychiatric symptoms such as depression, anxiety, fatigue, and cognitive slowing are known to be strongly correlated with thyroid dysfunction, especially hypothyroidism. The neuroendocrine dysregulation of serotonin, dopamine, and norepinephrine pathways—all of which are essential for mood regulation. If left untreated, the disruption of the hypothalamic-pituitary-thyroid (HPT) axis may worsen affective symptoms and impede healing.

Her mother's family history of major depressive disorder highlights the inherited nature of mood disorders and points to a genetic predisposition. Furthermore, the social history of family stress suggests that psychosocial factors contribute to the current episode's initiation and maintenance. Prolonged stress can cause the hypothalamic-pituitary-adrenal (HPA) axis to secrete more cortisol, which can disrupt mood, emotional stability, and sleep.

In clinical settings, it is common for depression and generalized anxiety disorder to coexist, which frequently leads to increased symptom severity, chronicity, functional impairment, physical complaints, insomnia, restlessness, and poor concentration which can make diagnosis more difficult and postpone proper treatment.

The pathophysiology includes changes in the brain's stress-response circuits, abnormalities in monoamine neurotransmission, and endocrine dysregulation, particularly in the thyroid and HPA axis. Consequently, it is crucial to treat both endocrine and mental disorders holistically.

Management:

Pharmacotherapy: Due to their dual efficacy in treating symptoms of anxiety and depression, SSRIs like escitalopram are recommended.

Thyroid hormone replacement: Levothyroxine therapy optimization to achieve euthyroid status.

Cognitive behavioural therapy (CBT): It is a type of psychotherapy used to treat maladaptive thought patterns and coping mechanisms.

Lifestyle changes: It includes family counselling to lessen psychosocial stressors, stress management strategies and good sleep hygiene. When these interventions are combined, mood, anxiety, and general functioning significantly improve.

CONCLUSION:

This case emphasizes the connection between **mental illnesses** and **endocrine dysfunction**. Psychosocial stress and underlying hypothyroidism probably made the patient's depression and generalized anxiety disorder worse.

The coexistence of these disorders highlights the necessity of a thorough **diagnostic strategy** that incorporates both biochemical and psychological testing. Effective recovery and relapse prevention depend on early detection and integrated care that includes medication, hormone control, and psychological support.

In treating patients with co-occurring depression, anxiety, and thyroid dysfunction, the case emphasizes the value of **interdisciplinary cooperation** between psychiatrists, endocrinologists, and psychologists.

In the end, treating both the biological and **psychosocial aspects** improves quality of life, improves prognosis, and results in long-lasting symptom remission.

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