

Thyroid and Psychiatry: Two Case Reports

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ABSTRACT

Medical co-morbidities are common in patients with Psychiatric Disorders. Thyroid disorders are one of the common medical disorders which have a strong association with Psychiatric disorders. They can not only be the cause of Psychiatric disorders but also play an important role in having an impact on management, course and prognosis. Screening for Thyroid disorders in patients with Psychiatric symptoms and disorder should be done for better management of such patients. This case report describes two such cases where Thyroid disorders and Psychiatric Disorders both play a prominent part and treatment of both has to go together for better management of the patient.

Key words: Hypothyroidism, Hyperthyroidism, Organic Manic Disorder

INTRODUCTION

Relation between Thyroid disorders and Psychiatric disorders is well known. And among the Psychiatric disorders, incidence of mood and anxiety disorders is higher in patients with thyroid disorders. (1-3) The association is not only related to the etiology of Psychiatric disorders but also connected with exacerbation of the original symptoms of the disorder with onset of Thyroid disorders, treatment of the Psychiatric disorder and possible augmentation with Thyroid hormones in certain resistant cases of depression. (4,5)

When it comes to psychosis, there have been studies which report of association between thyroid dysfunction and

schizophrenia or other psychosis. Schizophrenia- spectrum disorders have been found to have high prevalence of Thyroid disorders and dysfunction. (6-8) Few studies also report of Autoimmune thyroid disorders in patients with non- affective Psychosis. (9-11)

Like other Thyroid disorders Hyperthyroidism is not only associated with sleep disturbances, fatigue, decreased concentration and memory but irritability, restlessness, mania and delirium also can develop. Psychosis is a rare complication in hyperthyroidism and is reported in 1% of cases. (12,13) Manic symptoms are also found to develop in hyperthyroidism but that too is quite rare and if it occurs, is found to be late onset and mostly in females. (14,15)

In these two case reports we discuss one patient with exacerbation of Psychosis with new onset thyroid disorder and another patient, a rare case, of new onset hyperthyroidism causing Manic symptoms . Both the cases with totally different presentations in psychiatric symptoms and diagnosis but related to dysfunction in one gland that is the Thyroid gland. These case reports will establish the need for thyroid evaluation in patients with Psychiatric symptoms.

Case 1 Description

A 57 year old female, known case of psychiatric illness since 18 years who was on regular medications and maintaining well, was brought with complains of suspiciousness towards her relative/

neighbour, irritability and disturbed sleep since 3 months with worsening of symptoms since 20 days. There was a past history of 2 admissions for similar complaints and the same delusions, in 2000 and 2009 during which she was evaluated for Thyroid abnormalities and found to be normal. Patient in between these episodes was maintaining well on Amisulpride and was performing adequately socio occupationally. Nothing contributory could be found in the family history. Her premorbid and intermorbid personality was well adjusted. On General Physical Examination, patient was well built, well nourished with a BMI (Body Mass Index) of 33.3kg/m² and her vitals were stable. Systemic Examination was found to be within normal limits.

Mental Status Examination revealed her to be conscious and alert, adequately groomed and with normal talk and psychomotor activity. Delusion of persecution and delusion of infidelity were present and these were secondary, belonged to a single system and non-bizarre. Cognitive functions were intact with the patient having no insight into her illness.

MRI (Magnetic Resonance Imaging) was done and was found to normal. Blood investigations revealed Complete blood counts, Renal Functions, Liver Functions and Blood Sugars to be Normal. TFT (Thyroid Function Test) showed deranged levels with a high increase in TSH (Thyroid Stimulating Hormone) at 33.41 mIU/ml, decrease in Serum. T3 (Triiodothyronine) at 0.876 ng/mL, Serum. T4 (Thyroxine) at 3.63 mcg/dL and Serum. FT4 (Free Thyroxine) at 0.601ng/dL. Medicine opinion was sought and she was initiated on Levo-thyroxine 25mcg in the morning for her newly diagnosed Hypothyroidism. She was continued on Amisulpride in view of previous response and maintained at 500mg/day. She was discharged with a diagnosis of Delusional disorder, Hypothyroidism and Obesity. On next outpatient consultation her TFT levels had improved and her psychotic symptoms had decreased and by later consultations over

next 2 months she had reached her premorbid levels with further improvement in TFT levels.

Case 2 Description

A 55 year old married female was brought with complaints of decreased need for sleep, increased talk, irritability, decreased appetite, increased activity since 1 week. She also complained of feeling of snakes crawling up her body. There were no ongoing or new stressors reported. There was a past history of Pulmonary Tuberculosis 20 years back which was treated adequately, and no history of Psychiatric illness or substance use in the past. There was no significant family history. Premorbidly she had a well adjusted personality.

On General Physical Examination, patient was poorly built and nourished with a BMI of 13.9kg/m². She also had tachycardia with a pulse rate of 110 beats per minute. There were no other physical signs of thyrotoxicosis. There were no focal neurological deficits on examination. Other Systems were found to be within normal limits.

Mental Status Examination revealed her to be conscious and alert, with increased psychomotor activity, hitting the table and banging her head, conversing excessively in a loud tone and uninterruptible. Her affect was irritable and she reported of tactile hallucinations of snakes crawling on her legs which she denied being able to see. Blood investigations revealed Complete blood counts, Renal Functions, Liver Functions and Blood Sugars to be Normal. MRI Brain was normal and Chest X-Ray was also found to be normal. 2D echocardiography done in view of tachycardia was also found to be normal. TFT was deranged with unusually high decrease in Serum. TSH < 0.005 uIU/ml and, increase in Serum. T3 3.58 ng/ml, Serum. T4 19.34 mcg/dL and Serum. FT4 7.7ng/dL levels. Medicine and Cardiology consultations were sought in view of deranged TFTs and persistent tachycardia, respectively. Patient was started on

Carbimazole and Propranolol for her hyperthyroid state. She was started on Olanzapine which was gradually increased and maintained at 10 mg dose at night. Patient showed significant improvement in her mental status during her stay in hospital over 1 and half months. Her psychotic symptoms disappeared and manic symptoms also improved. Patient fulfilled ICD -10 (International Classification of Diseases, Tenth revision) criteria for a diagnosis of Organic Manic disorder as she had Hyperthyroidism. She was discharged with a diagnosis of Organic Manic disorder and hyperthyroidism. On further outpatient visits and repeat TFT it was found to be within normal limits and her Olanzapine was tapered to 2.5 mg over a period of 4 visits. Patient has reached her premorbid levels and plan is to stop her antipsychotic completely in the following months.

CASE DISCUSSION

Thyroid disorder is one of the common comorbidities seen in patients with Psychiatric disorders. The reason for this varies from autoimmune etiology to psychiatric medications induced thyroid disorders. (4,5,9-11) Also very commonly seen, is psychiatric symptoms or disorder caused by the Thyroid disorder itself, be it hypothyroidism or hyperthyroidism. In the above two cases Thyroid disorder plays two different roles.

In the first case it plays a role like any other new onset medical comorbidity in an old patient with Psychiatric disorder. New onset Medical comorbidities can cause, a recurrence or relapse of an episodic psychiatric illness or, an exacerbation of an old continuous Psychiatric disorder like Schizophrenia or Delusional disorder. (16) In this particular case it caused an exacerbation of an already existing Psychiatric disorder in spite of patient being compliant to medication and doing well for more than 10 years. There was an exacerbation of an old delusion and an encapsulated delusion became active again. The current symptom's etiology may not be due to

hypothyroidism as there is no temporal association and previous TFTs of the patients in the past were normal. This case points to importance of screening for Thyroid dysfunctions in patients with not only new onset psychiatric symptoms but even in those who present with exacerbation of old psychiatric symptoms. Thyroid disorder in itself can be the reason for the symptoms and its treatment can prevent the requirement of increasing the dose of antipsychotics, with the patient reaching premorbid levels with improvement in thyroid status.

In the Second case the thyroid disorder itself is the cause for Psychiatric symptoms. The added evidence of studies showing that hyperthyroidism can cause manic symptoms, temporal correlation of blood investigation results of TFTs showing hyperthyroidism, absence of past or family history of psychiatric illness in the patient and improvement in thyroid levels causing improvement in psychiatric symptoms, indicate to the diagnosis of Organic Manic Disorder and hyperthyroidism being the cause for it. The case also fits into other case studies which reported hyperthyroidism induced manic symptoms to be late onset and predominantly being seen in females. (14,15) Hence whenever a patient presents with late onset manic symptoms care should be taken to rule out medical comorbidities and more importantly Thyroid disorders. If this is not done we would be just treating the patients Psychiatric symptoms and not the cause for it, and in turn unnecessarily putting a patient through long duration and high doses of antipsychotics. This case is also a very rare case and seen in only 1 percent of cases of hyperthyroidism. (12-15)

CONCLUSION

Both the cases in this case report highlight the need for investigating patients with Psychiatric disorders, be it new onset, relapse or recurrence, for Thyroid disorders and Dysfunction. The presence of Thyroid disorders in Psychiatric patients, like any other medical comorbidity, will have an

impact on diagnosis, course, treatment, prognosis and complications of the Psychiatric disorder. Prompt and adequate treatment of the thyroid disorder will in turn help in the management of the Psychiatric disorder and thereby improve its course and prognosis. Hence keeping a high degree of suspicion of Thyroid disorders and screening for them, in both new and old patients of Psychiatric illness, will go a long way in better management of a patients and improving their quality of life.

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