

Case Report

A Case Report on Myxedema Madness: Curable Psychosis

Nimesh Parikh, Prateek Sharma, Chirag Parmar

ABSTRACT

Myxedema madness is a very rare but established entity. A psychotic patient having hypothyroid features should always be evaluated regarding same. A 30-year-old female without known significant past medical history had, for the past one and half year, continuous persecutory and referential delusions; second and third person auditory hallucinations, facial puffiness and Brief Psychiatric Rating Scale (BPRS) score of 41 on admission. Her thyroid profile was: Thyroid stimulating hormone - 63.71 mIU/L, Free tri iodo threonine (FT3) - 2.1 pg/ml, free tetra iodo thyronine (FT4) - 0.6 ng/ml with normal ultrasound-thyroid. Patient was started on thyroxin 100 µg with a low dose risperidone 2 mg. Risperidone was withdrawn over a week and the patient was discharged on thyroxin alone with BPRS score of 8 and absence of delusions and hallucinations.

Key words: *Madness, myxedema, persecutory, psychosis, referential*

INTRODUCTION

History

“The Clinical Society of London” first linked myxedema with psychosis in the latter half of 19th century. The study noted 109 patients of myxedema and reported that “delusions and hallucinations occur in nearly half of the cases mainly with advanced disease.”^[1]


The relationship between myxedema (severe hypothyroidism) and psychosis was strengthened by works of “Asher” who coined the term “myxedema madness,”^[2] in the latter half of 20th century. Since then, numerous case reports have been published strengthening the existence of this entity.^[3-5]

Background

Hypothyroidism is a common disorder. Patients having advanced form of this disease (myxedema) and presenting with a myriad of psychiatric symptoms are difficult to link and diagnose, unless seen with a high degree of suspicion. The common symptoms are fatigue, cold intolerance, menstrual abnormalities, decreased appetite and constipation. Commonly recognized signs include hoarse voice, bradycardia, non-pitting edema, facial puffiness, slow speech, delayed relaxation phase of deep tendon reflex and fatigue.

Psychiatric signs and symptoms

The myxedema patient may report psychiatric symptoms only as presenting complaints. The psychiatric symptoms range from inattentiveness, lethargy, affective abnormalities, delusions, hallucinations and delirium. At times, the behavior abnormalities are so striking that a patient is first diagnosed with primary psychiatric disturbance rather than hypothyroidism.^[6] Depression is the most common affective alteration. No correlation appears to exist between degree of thyroid dysfunction and the psychiatric symptoms.^[7]

Access this article online	
Website: www.ijpm.info	Quick Response Code 
DOI: 10.4103/0253-7176.127260	

Department of psychiatry, V S Hospital, Ahmedabad, Gujarat, India

Address for correspondence: Dr. Prateek Sharma

Department of Psychiatry, VS Hospital, Ahmedabad - 380 006, Gujarat, India. E-mail: prateek.sharma89@rediffmail.com

Postulated mechanism

The neurobehavioral effects of thyroxin on the brain may be related to its action on neurotransmitters. It has been shown that in rats with iatrogenically induced hypothyroidism increase in cerebral dopamine level and tyrosine hydroxylase activity is there.^[8]

CASE REPORT

Mrs. X, a 30-year-old female without a known significant past medical history was brought with a 1½ year continuous disturbance in the form of having suspiciousness, fearfulness and quarrel with neighbors with gradual and progressive work impairment.

She, on provocation, anxiously reported that “someone has done black magic on her. She along with her children would be harmed and daughters sold off in flesh trade by the neighbors.”

For self-defense, she used to sleep with a knife under her pillow.

At home, mostly she was noted to be withdrawn and fearful. Whenever husband went out to work then she'd run to her sister's house and had to be fetched back home for which she was reluctant always in coming.

On active enquiry; she reported a voice commanding her to run away from the house if she wished to be safe, also of having other auditory hallucinations of people (neighbors) talking amongst themselves about ways of harming her and her family.

Patient was admitted to our psychiatry ward for evaluation and work-up.

After admission Mrs. X's vitals were normal. Facial puffiness was observed in physical examination. Her neurological examination was normal. On mental status examination, she was conscious and oriented to time, place and person with poor eye contact, low tone rough voice with a paucity of speech, psychomotor activity was decreased and affect was apathetic. She was guarded about her hallucinations but came out easily with her delusions with a BPRS score of 41. Depressive features or death wish were not reported.

General blood profile was normal with a normal chest X-ray and electrocardiography. Thyroid profile was altered with thyroid stimulating hormone - 63.71 mIU/L, Free

tri iodo thyronine (FT3) - 2.1 pg/ml, Free tetra iodo thyronine(FT4) - 0.6 ng/ml and normal ultrasound-thyroid. Patient was started on thyroxin 100 µg after consultation from the endocrine department of our hospital and a low dose risperidone 2 mg, which was then withdrawn over a week with the recovery of her behavioral abnormalities and then she was continued with thyroxin alone. She was discharged after about 2 weeks of hospitalization with the absence of any hallucinations and delusions with a BPRS score of 8. After 1 month, on second follow-up, relatives reported a 90% overall improvement and absence of delusions and hallucination. Brief Psychiatric Rating Scale score was three.

DISCUSSION

The myxedema patient presenting with frank psychotic features of delusions and hallucination without having affective symptoms was benefitted from an early intervention and apt correction of hypothyroidism.

So every patient presenting with psychotic features having signs or symptoms suggestive of hypothyroidism should have a complete thyroid work-up to minimize the unnecessary long-term administration of antipsychotics.

This case report demonstrates the potential reversible nature of psychosis of myxedema madness.

REFERENCES

1. Report of the Committee of the Clinical Society of London to investigate the subject of myxoedema. *Trans Clinical Society of London*, 1888;21(suppl):1-215.
2. Asher R. Myxoedematous madness. *Br Med J* 1949;2:555-62.
3. Westphal SA. Unusual presentations of hypothyroidism. *Am J Med Sci* 1997;314:333-7.
4. McGaffee J, Barnes MA, Lippmann S. Psychiatric presentations of hypothyroidism. *Am Fam Physician* 1981;23:129-33.
5. Tachman ML, Guthrie GP Jr. Hypothyroidism: Diversity of presentation. *Endocr Rev* 1984;5:456-65.
6. Pomeranze J, King EJ. Psychosis as first sign of thyroid dysfunction. *Geriatrics* 1966;21:211-2.
7. Jain VK. Affective disturbance in hypothyroidism. *Br J Psychiatry* 1971;119:279-80.
8. Chan BL, Singer W. The hypothalamic-pituitary-thyroid axis: Clinical and theoretical principles. In: Joffe RT, Levitt AJ, editors. *The Thyroid Axis and Psychiatric Illness*. Washington, DC: American Psychiatric Press, Inc.; 1993. p. 147-68.

How to cite this article: Parikh N, Sharma P, Parmar C. A case report on myxedema madness: Curable psychosis. *Indian J Psychol Med* 2014;36:80-1.

Source of Support: Nil, **Conflict of Interest:** None.