Case Report

Thyrotoxicosis Presenting with Capgras Delusion

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Abstract

Background: Psychiatric manifestations of hyperthyroidism are usually anxiety and depression. Psychosis is rare and affects around 1 %.
Case description: We present a 54 year old lady with hyperthyroidism who presented with psychosis as well as Capgras delusions. It is a disorder in which a person holds a delusion that a friend, spouse, parent, or other close family member has been replaced by an identical-looking imposter. The symptoms resolved with correction of her hyperthyroid status and low doses of risperidone which was stopped after discharge.
Conclusion: Psychosis can be a rare presentation for patients with hyperthyroidism and it is important for clinicians to be aware of this (German J Psychiatry 2013; 16 (3): 119-121).

Keywords: Hyperthyroidism, psychosis, Capgras delusion

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Introduction

Hyperthyroidism or thyrotoxicosis is a common endocrine disease with prevalence of 1.3 per cent (Hollowell et al., 2002). In addition to the physical manifestations, thyrotoxic patients frequently suffer from psychological difficulties, and occasionally psychiatric features predominate and the patient presents with an acute psychosis (Brownlie et al., 2000).

Psychosis is a rare complication in hyperthyroidism with reports of 1% of cases (Jane et al., 2002). On the other hand, Capgras delusion is one of the rarest and most colourful syndromes in neurology (Ellis et al., 1990) and occurs in many psychiatric conditions.

The Capgras delusion is classified as a delusional misidentification syndrome, a class of delusional beliefs that involves the misidentification of people, places, or objects. It can occur in acute, transient, or chronic forms. The delusion is most common in patients diagnosed with schizophrenia, although it can occur in connection with a number of conditions, including brain injury and dementia.

Here we report a case which is unique as this illustrates a rare complication of hyperthyroidism presenting with a rare psychopathology, Capgras delusion.

Case Report

A 54 year old married female, a factory worker with no past psychiatric illness presented to the psychiatric hospital in September 2011 with complaints of change of behaviour of one month duration. She claimed that neighbours used black magic to enter her house even when it was locked by stealing her key and stole her clothes and other items such as her spectacles which was corroborated by her husband. She further elaborated that she had seen neighbours wearing her stolen clothes, the claim which was negated by the husband. She cautioned the husband to be careful about the neighbours and she sent away the tenant living with them for 6 months as she thought the tenant might became a victim of the neighbours. She closed the windows of the house always as she feared neighbours might hurl dirty objects in to her house. Because of these beliefs, she confronted the neigh-

bours verbally but fortunately she did not at any time physically try to harm them. Nevertheless, she made at least one complaint against the neighbours and blamed the law enforcing authorities for their negligence and inaction. Her neighbours lodged a number of complaints against her as she knocked their doors even at night and husband claimed that she was y warned by the police for her behaviour.

With time, she started to believe that her husband was not her actual husband and thought that he had been replaced by an imposter who was her neighbour. She noted her imposter husband was smelly and dirty which was unusual of her original husband. She did not allow the husband to sleep in the bed room. Moreover, she scolded him and slapped him several times and during the past week; she even tried to assault him with the wooden sticks, which the husband managed to ward off. Because of these risky behaviours her husband slept in his sister's house for his safety. She did not exhibit any mood symptoms.

According to her family history, none of her family suffered from any major psychiatric illness. She did not consume any psychoactive substances. Her premorbid personality revealed she was a quiet and sensitive person who had a very few close friends. She was well respected by colleagues in her working place for her trustworthiness and interactions with others.

Past medical history revealed that she had been diagnosed to have hyperthyroidism for nearly 10 years and had been treated with carbimazole by a family physician which she had defaulted 4 years ago. She claimed she was asymptomatic until she presented to polyclinic in July 2011 with complaints of insomnia, anxiety, palpitation, weight loss of 4kg over 2 months. She did not have heat intolerance, increased appetite or tremors. She had a small diffuse goitre and palmar erythema but no tachycardia, pretibial myxoedema and eye signs such as lid lag, exophthalmos or ophthalmoplegia were not noted.

Thyroid function test (TFT) done in July 2012 showed free thyroxine (FT4) level of 66.4pmol/L [reference range: 11.8-24.8] and TSH level of less than 0.02mIU/L [reference range 0.270-4.200], which were indicative of primary hyperthyroidism. Her TSH receptor antibodies were elevated (10.1 IU/L) which was suggestive of Graves's disease or any other autoimmune thyroid disease. She was treated with carbimazole 10mg at night. Repeat TFT done in September 2011 showed FT4 of 30.1 pmol/L and TSH of 0.018 IU/L, hence carbimazole was increased to 10mg twice daily.

She was on nifedipine 30mg in the morning and atenolol 50mg in the morning for her hypertension. She did not have any evidence suggestive of other autoimmune diseases such as Addison's disease, pernicious anaemia or rheumatoid arthritis. Basic investigations such as full blood count, renal function test, liver function test, lipid profile and fasting glucose were normal. Then neurological examination was normal. A CT scan of the brain done in September 2011 was normal.

She was treated with risperidone 2 mg at night and her symptoms gradually disappeared in 3 weeks. The TFT done during this period of time indicated FT4 of 20.3 pmol/L, which was within normal limits and TSH of 0.007 IU/L. The patient was discharged to the care of husband with endocrinology and psychiatric follow up appointments. She was reviewed in the psychiatric outpatient clinic after 1 month when she did not exhibit any psychotic symptoms.

Her risperidone was tapered off. She started to go back to work and interacted well with the husband and neighbours.

Discussion

Hyperthyroidism affects females much more common than males in a ratio of approximately 6:1 with prevalence for hyperthyroidism ranged from 0.86–2.5% in females and 0.17–0.6% in males (Leese et al., 2008).

Common psychiatric syndromes in hyperthyroidism are anxiety and mood disturbances as the thyroid hormone is said to influence the functioning of the brain and can interact with mood regulation through targets in specific brain connections (Bauer et al., 2002). It should also be kept in mind that psychiatric disorders including schizophrenia can lead to alteration in thyroid function tests and hyperthyroxinemia (Joffe & Levitt 1990).

The treatment for primary hyperthyroidism, which was the core component of the management of this patient, includes antithyroid drugs such as carbimazole, radioiodine therapy and/or thyroidectomy. Owing to their slow onset of action and potential toxicity, psychotropic drugs such as lithium, benzodiazepines, antidepressants and antipsychotics are not recommended as the primary treatment for psychiatric manifestations of hyperthyroidism. Nevertheless when severe mental symptoms such as agitation and psychoses are present as in this case, dopamine receptor blockade with an antipsychotic may be indicated (Bunevicius & Arthur, 2006).

This case illustrates one of the rare psychiatric complications of hyperthyroidism causing psychosis with presence of Capgras delusions. Authors would like to emphasise that clinicians should be aware of this complication or else the behavioural disturbances could be attributed to the psychological manifestations of thyrotoxicosis such as apprehension and irritability, thereby missing psychosis.

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