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RESEARCH ARTICLE

AN ACUTE PSYCHOSIS REVEALING HYPERTHYROIDISM: A CASE REPORT

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Abstract

Psychiatric presentations may be a discovery circumstance for hyperthyroidism, but may also delay the diagnosis. The occurrence of psychotic disorders is rarely described during the course of hyperthyroidism. The link between these two conditions remains unclear. We report in this study a clinical case of psychotic disorders induced by hyperthyroidism.

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Introduction:-

Hyperthyroidism is a common disease due to an hyperactive functioning of the thyroid gland. Its prevalence in the general population varies between 0.5% and 2%, with a slight female predominance. The correlation between thyroid disease and psychiatric symptoms is well established. Psychotic symptoms in hyperthyroidism have been reported in very rare cases and they occur in less than 1% of patients with hyperthyroidism [1-2].

Screening for psychiatric disorders of organic origin is a crucial concern for the psychiatrist. In daily practice, psychiatrists are often encountered with mental disorders with unusual symptoms. These symptoms might be caused by a systemic physical condition. Inability to recognise these pathologies may lead to a lack of proper management and effective treatment [3]. The aim of this study is to discuss, through a clinical case, the psychotic disorders induced by hyperthyroidism.

Case Report

A 40-year-old female patient of low socioeconomic status presented with a history of a goitre that had never been treated for several years. Two months before her admission to the psychiatric emergency department, the patient developed behavioural disorders such as recurrent psycho-motor agitation with aggression and verbalization of incoherent statements, delirium of bewitchment and filiation with a persecutory state. She was assessed in the somatic emergency department by means of a brain CT scan, a blood ionogram, a blood count, and an infectious, renal and liver check-up, all of which showed no abnormalities, while the thyroid check-up revealed a low TSHus level along with increased levels of thyroid hormones FT3 and FT4. The ultrasound revealed a multinodular thyroid goitre. The patient was hospitalised, received the anxiolytic lorazepam 7.5 mg/dl, the antipsychotic Olanzapine 5 mg/dl, and carbimazole-based antithyroid treatment. The course was characterized by an improvement of the delusional symptoms and the patient remains stable during follow-up.

Discussion:-

Functional impairments of the thyroid are often associated with cognitive and psychiatric disorders [4-5]. Cognitive decline, dysphoria and depression are common manifestations of obvious hypothyroidism, whereas hyperthyroidism can cause agitation, acute psychosis and apathy, especially in old people [6]. The occurrence of mental disorders,

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particularly mood disorders, during thyroid disease has been known for over a century. Similarly, psychological manifestations may contribute to the discovery of various endocrine diseases, such as hyperthyroidism [7]. Delusional psychotic manifestations in hyperthyroidism have been reported in rare cases. The gravity of the hyperthyroidism, its duration, the chronological link between the disorders and the rapid regression of the psychotic symptoms under antithyroid treatment are the main arguments for a thyroid source. Most cases reported in the literature had mainly Graves' disease or multinodular goitre. The severity of the psychiatric symptoms often reflects the severity of the hyperthyroidism. In most cases, these conditions are curable and have a good prognosis [8-9-10-11]. The underlying mechanisms of these psychotic symptoms are not yet well understood, but a large number of thyroid hormone receptors are located in the brain, particularly in the limbic system. These receptors affect many functions including behaviour, mood and long-term memory. It seems that excessive thyroid hormones affect the activity of neurotransmitters such as serotonin and dopamine in this region of the brain, which may be the reason behind the neuropsychiatric manifestations observed during hyperthyroidism [12-13].

Conclusion:-

The association between hyperthyroidism and psychosis is still poorly described in the literature, however, the few cases reported highlight the complexity of the interactions between thyroid hormones and neurotransmitters as well as the importance of early detection and treatment of thyroid disease.

Conflict of interest

The authors declare that they have no conflicts of interest in relation to this article.

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