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RESEARCH ARTICLE

PSYCHOTIC MANIFESTATIONS AS THE FIRST PRESENTATION OF GRAVES' DISEASE

Farah N'sabi^{1,2}, Ibtissam Koubaa^{1,2}, Bouchra Oneib^{1,2} and Fatima El Ghazouani^{1,2}

1. Faculty of Medicine and Pharmacy of Oujda (FMPO), Mohamed the First University, Morocco.
2. Research for Mental Health, University Psychiatric Hospital, Oujda, Morocco.

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Abstract

Graves' disease is the most common cause of hyperthyroidism. Patients with Graves' disease frequently manifest various psychiatric disorders; however, very few reports have described psychotic disorders due to this disease. We report the case of a 42-year-old man with no prior psychiatric or thyroid dysfunction history, presenting apparent psychotic symptoms consisting of delusional ideas of persecution and a delusion of reference with a hallucinatory mechanism. A thyroid test is systematically requested, and fortuitous hyperthyroidism is discovered, followed by cervical ultrasound and autoimmune tests, which confirmed the diagnosis of Graves' disease.

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Introduction:-

Graves' disease is an autoimmune disorder that is the most common cause of hyperthyroidism, affecting 1% to 3% of the population, with a female predominance (1). Hypothyroidism is implicated in various psychiatric pathologies, notably mood disorders. However, psychotic disorders are rarely described, with only a few cases published. The link between these two conditions is still poorly understood (2). The objective of this work is to report through this clinical case the occurrence of psychotic disorders during Graves' disease and emphasize the importance of detecting thyroid dysfunction during psychiatric manifestations.

Case:

The patient is a 42-year-old man, hospitalized in a psychiatric department for agitation. He had no previous history of psychiatric or somatic disorders. The disease history goes back 2 months, with the appearance of delusional ideas of persecution towards his family with an intuitive mechanism, and no mood symptoms present.

At admission, the patient was conscious with a neutral mood, experiencing delusions of persecution and reference, coupled with hallucinatory experiences. No somatic anomalies were observed. The patient was initially treated with risperidone 2mg, gradually increased to 6mg. A thyroid hormone test revealed a collapsed level of thyroid stimulating hormone (TSH) with normal levels of thyroid hormones FT3 and FT4. Tests for thyroid microsomal antibody (TSH R) and thyroglobulin were positive. A cervical ultrasound revealed a homogeneous hypervascular goiter, confirming the diagnosis of Graves' disease.

The patient was prescribed carbimazole, and over the course of 3 months of treatment, there was a disappearance of psychiatric symptoms, including critical delusions, and stabilization of thyroid hormone levels. Subsequently, the patient was transferred to the endocrinology department for further care.

Corresponding Author:- Farah N'sabi

Address:- Faculty of Medicine and Pharmacy of Oujda (FMPO), Mohamed the First University, Morocco.

Discussion:-

Hyperthyroidism usually manifests with various psychiatric disorders such as anxiety, emotional lability, insomnia, agitation, mania, or depression. However, cases of psychosis associated with hyperthyroidism remain rarely reported in the literature(3), highlighting the rarity of this clinical case. The association of thyroid symptoms of hyperthyroidism and psychiatric disorders was described by Robert Graves in 1835 (3). Adequate treatment for hyperthyroidism has improved the control of thyroid functions, leading to less severe physical and psychiatric symptoms (4).

Hyperthyroidism can be accompanied by atypical symptoms, including apathy and neurocognitive disorders, often reported in elderly patients (5,6). The pathogenesis of psychiatric disorders in hyperthyroidism remains unknown. Some studies suggest that an excess of thyroid hormone, affecting T3 receptors in the brain, especially in the limbic system, or through neurotransmitters, particularly catecholamines, may contribute to the development of psychotic states (2,7,8)

The association between mental symptoms and autoimmune thyroiditis, along with the correlation between psychometric scales and serum TSH R antibody concentrations (9), suggests that the autoimmune process may be responsible for psychiatric disorders in Graves' disease. Persistent stimulation of TSH-Rs in the cerebral cortex and hippocampus, both rich in these receptors, may contribute to increased local production of triiodothyronine (10). Furthermore, stress has been linked to Graves' disease (11), and antithyroid therapy usually helps regress neuropsychiatric symptoms, although psychotic manifestations have been reported in some cases (12,13)

Conclusion:-

This clinical case emphasizes the complexity of interactions between hormones and neurotransmitters, with psychiatric symptoms potentially being a manifestation of an endocrine pathology. Early detection and treatment of thyroid disease are crucial, and attention should be paid to the emotional and psychological state of patients with thyroid dysfunction.

Bibliographie:-

1. Macedo LR, Marino J, Bradshaw B, Henry J. Graves' Hyperthyroidism-Induced Psychosis Treated With Aripiprazole—A Case Report. *J Pharm Pract.* 2013 Feb;26(1):59–61.
2. Bunevicius R, Prange AJ. Psychiatric manifestations of Graves' hyperthyroidism: pathophysiology and treatment options. *CNS Drugs.* 2006;20(11):897–909.
3. Bunevicius R, Prange AJ. Psychiatric Manifestations of Graves' Hyperthyroidism. *CNS Drugs.* 2006 Nov 1;20(11):897–909.
4. Brownlie BE, Rae AM, Walshe JW, Wells JE. Psychoses associated with thyrotoxicosis - "thyrotoxic psychosis." A report of 18 cases, with statistical analysis of incidence. *Eur J Endocrinol.* 2000 May;142(5):438–44.
5. Thomas FB, Mazzaferri EL, Skillman TG. Apathetic thyrotoxicosis: A distinctive clinical and laboratory entity. *Ann Intern Med.* 1970 May;72(5):679–85.
6. Peake RL. Recurrent apathetic hyperthyroidism. *Arch Intern Med.* 1981 Feb;141(2):258–60.
7. Whybrow PC, Prange AJ. A hypothesis of thyroid-catecholamine-receptor interaction. Its relevance to affective illness. *Arch Gen Psychiatry.* 1981 Jan;38(1):106–13.
8. Snabboon T, Khemkha A, Chaiyaumporn C, Lalitanantpong D, Sridama V. Psychosis as the first presentation of hyperthyroidism. *Intern Emerg Med.* 2009 Aug 1;4(4):359–60.
9. Fukao A, Takamatsu J, Murakami Y, Sakane S, Miyauchi A, Kuma K, et al. The relationship of psychological factors to the prognosis of hyperthyroidism in antithyroid drug-treated patients with Graves' disease. *Clin Endocrinol (Oxf).* 2003 May;58(5):550–5.
10. Köhrle J. Local activation and inactivation of thyroid hormones: the deiodinase family. *Mol Cell Endocrinol.* 1999 May 25;151(1–2):103–19.
11. Sonino N, Girelli ME, Boscaro M, Fallo F, Busnardo B, Fava GA. Life events in the pathogenesis of Graves' disease. A controlled study. *Acta Endocrinol (Copenh).* 1993 Apr;128(4):293–6.
12. Winsa B, Adami HO, Bergström R, Gamstedt A, Dahlberg PA, Adamson U, et al. Stressful life events and Graves' disease. *Lancet Lond Engl.* 1991 Dec 14;338(8781):1475–9.
13. Chatti S, Marrag I, Chebbi W, Jmal M, Marmouch H, Zantour B, et al. Une psychose délirante relevant d'une maladie de Basedow. *Ann Endocrinol.* 2013 Sep 1;74(4):376–7.