MYXOEDEMA MADNESS: TWO CASE-REPORTS

Nuno de Moura ^a; Hugo Canas Simião ^a; Leonor Santana ^a; Catarina Melo Santos ^a; Ana Rita Moura ^{a,b}; Ricardo Caetano Silva ^{a,b};

^a Department of Psychiatry and Mental Health, Centro Hospitalar de Lisboa Ocidental, Rua da Junqueira 126, 1340-019, Lisboa, Portugal
^b NOVA Medical School | Faculdade de Ciências Médicas, New University of Lisbon, Campo Mártires da Pátria 130, 1169-056 Lisboa, Portugal

Objectives

- We report two cases of clinical hypothyroidism in association with psychosis and review the literature describing the relationship between both.

Background

- Hypothyroidism can be found in 0.3% to 0.4% of people, and subclinical hypothyroidism in 4.3% to 8.5% with a female predominance [1].
- Psychosis secondary to hypothyroidism was first described as "**myxoedematous madness**" in 1949 by Asher when he presented 14 cases of patients with myxoedema and psychosis [2]. Most commonly, this disease state can be found in patients with longstanding Hashimoto thyroiditis, after thyroidectomy, or with medication noncompliance.
- Although the occurrence of mood symptoms during thyroid diseases is known since a century, **psychotic symptoms are rarely described**. They typically appear after the onset of physical symptoms, most often with a delay of months or years [3].
- Nonetheless, sometimes the behavioral changes are so conspicuous that a primary psychotic disorder comes to mind instead of hypothyroidism [4].

Methods

- Relevant clinical information was extracted retrospectively from the patient's clinical record after obtaining informed consent. In addition, we searched Pubmed^R database with the terms "Hypothyroidism", "Psychotic" and "Myxedema".

Clinical cases

- A **55-year-old woman**, with a known dysthymia but an otherwise unremarkable medical history was admitted to our emergency department (EP) because of **acute-onset delusions of ruin and persecution**. Upon admission, her general physical examination was normal. However, initial test results showed a thyroid-stimulating hormone level (TSH) of >100 mIU/L, a free thyroxine level (FT4) of 4.14 pmol/L and positive antithyroglobulin (TgAb) and antithyroperoxidase (anti-TPOAb). No other clinical or laboratory abnormalities were found. The patient was started on levothyroxine 100 µg after consultation from the endocrine department of our hospital and risperidone 2 mg and was discharged two weeks after asymptomatic.
- A **63-year-old woman**, with a known diagnosis of recurrent depression taking venlafaxine 150 mg and lithium 400 mg was brought to our EP with a **3-month duration of persecutory delusions and complex visual hallucinations**. General blood profile as well as the physical examination were normal. Thyroid profile showed a TSH level of >100 mIU/L, a FT4 level of 5.2 pmol/L and positive TgAb and anti-TPOAb. She began treatment with levothyroxine 75 µg and risperidone 4 mg and was discharged after one week of hospitalization without psychotic symptoms

Discussion and conclusions

- If left untreated, hypothyroidism can lead to many neuropsychiatric symptoms including **cognitive disturbances, mood symptoms, psychosis or coma**. [1]
- Myxoedema psychosis is **rarely the initial presenting symptom of hypothyroidism**, especially in the absence of other abnormal clinical or laboratory findings.
- These cases help to illustrate the importance of promptly recognizing and initiating treatment for reversible causes of psychosis in an atypical presentation of a common medical condition.
- Every patient presenting with psychotic symptoms should have a **complete thyroid work-up** to minimize the unnecessary and potentially hazardous long-term administration of antipsychotics [4].

REFERENCES

- [1] Mavrosou, M. M., Patel, N., & Akker, E., 2017. Myxedema Psychosis in a Patient With Undiagnosed Hashimoto Thyroiditis. The Journal of the American Osteopathic Association, 117(1), 50.
- [2] Asher R., 1949. Myxoedematous madness. BMJ. 2:555–62
- [3] Morosan Allo YJ, Rosmarin M, Urrutia A, Faingold MC, Musso C, Brenta G., 2015. Myxedema madness complicating postoperative follow-up of thyroid cancer. Arch Endocrinol Metab. 59(4):359-363.
- [4] Sharma, P., Parmar, C., & Parikh, N., 2014. A case report on myxedema madness: Curable psychosis. Indian Journal of Psychological Medicine, 36(1), 80.