



A Rare Case of Euthyroid Graves' Orbitopathy

Nadir Bir Ötiroid Graves Orbitopati Vakası

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A 29-year-old male presented with a 3-4-month history of progressive bilateral eye protrusion, tearing, intermittent retrobulbar pain, and diplopia on upgaze.

He was initially admitted to the general internal medicine department. The patient had bilateral proptosis and eyelid retraction, particularly in the right eye (Figure 1). There were no signs of lid-lag. Thyroid gland was non-palpable, and there was no evidence of pain, tenderness, warmth, or any signs of a thyroid nodule or mass. Systemic examination was normal. He denied fever, weight loss, palpitations, tremor, heat intolerance, or neck compression symptoms. His past medical history was unremarkable, and he was not on any regular medication. There was no family history of thyroid disease. He was evaluated for possible thyroidal and non-thyroidal causes of proptosis. After taking the patient's history, routine blood tests and thyroid function tests (TFTs) were requested. Routine blood tests were unremarkable, and TFTs were within normal range [TSH= 1.27 mIU/L, normal range (NR): 0.38-5.33 mIU/L], FT4 9.75 pmol/L (NR= 7.86-14.41 pmol/L), FT3 5.82 pmol/L (NR= 3.8-6 pmol/L). The patient was referred to ophthalmology to investigate non-thyroidal etiologies such as orbital tumors, idiopathic orbital inflammation, myositis, or infection (1). In the examination performed by Ophthalmology, anterior segment was normal except for bilateral exophthalmos without eyelid edema or conjunctival injection. Fundus examination was normal. Ocular motility assessment revealed restricted movements in multiple gaze directions in both eyes and vertical diplopia. Clinical Activity Score (CAS) was 1-2.

For further evaluation and diagnosis, a contrast-enhanced orbital MRI was performed. Imaging showed bilateral proptosis with fusiform enlargement and contrast enhancement of the inferior and

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Figure 1. Bilateral proptosis and eyelid retraction, particularly in the right eye.

medial rectus muscles (right > left) and involvement of the superior oblique muscle, with preserved tendon insertions, a radiological pattern characteristic of thyroid orbitopathy.

Anti-TPO and anti-Tg antibodies were negative. However, TSI was positive according to the laboratory reference range, confirming autoimmune thyroid stimulation despite biochemical euthyroidism.

Based on clinical findings, typical MRI pattern, and positive TSI, the patient was diagnosed with TSI-positive Euthyroid Graves Orbitopathy (2). He was started on lubricating eye drops and referred to Endocrinology for close follow-up, given the risk of developing overt Graves disease in the future.

CONFLICT of INTEREST

No conflict of interest declared.

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