

Unilateral Exophthalmos Of Graves' Disease

Graves Hastalığı'nın Tek Taraflı Eksoftalmusu
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Başvuru: 03.08.2018
Kabul: 17.09.2018
Yayın: 17.09.2018

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Özet

Graves hastalığı, genellikle 20-50 yaş arası kadınlarda görülen bir tiroid hastalığıdır. Ötiroid Graves oftalmopatisi bu hastaların % 3'ünde görülür. Graves hastalığının en yaygın ekstrasitroidal belirtisi tiroid ilişkili orbitopatidir. Tiroid hastalıklarında sekonder orbital tutulum genellikle bilateraldir. % 10-15 olguda asimetric olabilir ve daha sonra bilaterale dönebilir. Asimetric tek taraflı orbitopati nadir değildir, ancak asimetric ekzoftalmi hastaları yanlış teşhis edilebilir.

Anahtar kelimeler: eksoftalmus, Graves Hastalığı, orbitopati

Abstract

Graves' disease is a thyroid disease usually seen in women between the ages of 20 and 50 and euthyroid Graves' ophthalmopathy is seen in 3% of these patients. The most common extrathyroidal sign of Graves' disease is thyroid-associated orbitopathy (TAO). Secondary orbital involvement in thyroid diseases is usually bilateral. 10-15% of the cases may be asymmetric and they may later become bilateral. Asymmetric unilateral orbitopathy is not uncommon, but asymmetric exophthalmos patients may be misdiagnosed.

Keywords: exophthalmos, Graves' disease, orbitopathy

Introduction

Graves' disease is usually seen in women between the ages of 20 and 50. Euthyroid Graves' ophthalmopathy is seen in 3% of these patients¹. The most common extrathyroidal sign of Graves' disease is thyroid-associated orbitopathy (TAO)². Secondary orbital involvement in thyroid diseases is usually bilateral and 10-15% of the cases may be asymmetric; they may later become bilateral³⁻⁵. Some reports suggest that unilateral disease may be bilateral or initially bilateral but not clinically observed. Asymmetric unilateral orbitopathy is not uncommon, but asymmetric exophthalmos patients may be misdiagnosed, especially when they are euthyroid, or unnecessary additional tests such as orbital examination may be needed to make a diagnosis. We would like to contribute to the literature by recalling that TAO should be conceived in the differential diagnosis of asymmetric exophthalmos in each case.

Case Report

A 30-year-old man was admitted to our hospital about one year ago with tremor, nervousness, irresponsibility, excessive weight loss, and unilateral ophthalmopathy. On physical examination, the thyroid gland was bilaterally diffusely enlarged and softly palpated and exophthalmia on the right side was seen (Figure 1).



Figure 1

Exophthalmia on the right side (Image 1)

In laboratory tests, TSH <0.05 , sT4 > 70 , Anti TPO 343, Anti TG 130 were found and the patient was treated with propylthiouracil for 1 year. Ultrasonography revealed that the thyroid lobe and isthmus were bigger than normal (right lobe long axis > 80 mm, left lobe 60 mm) (Figure 2) and scintigraphy findings were consistent with the diffuse hyperplastic thyroid gland (Figure 3).

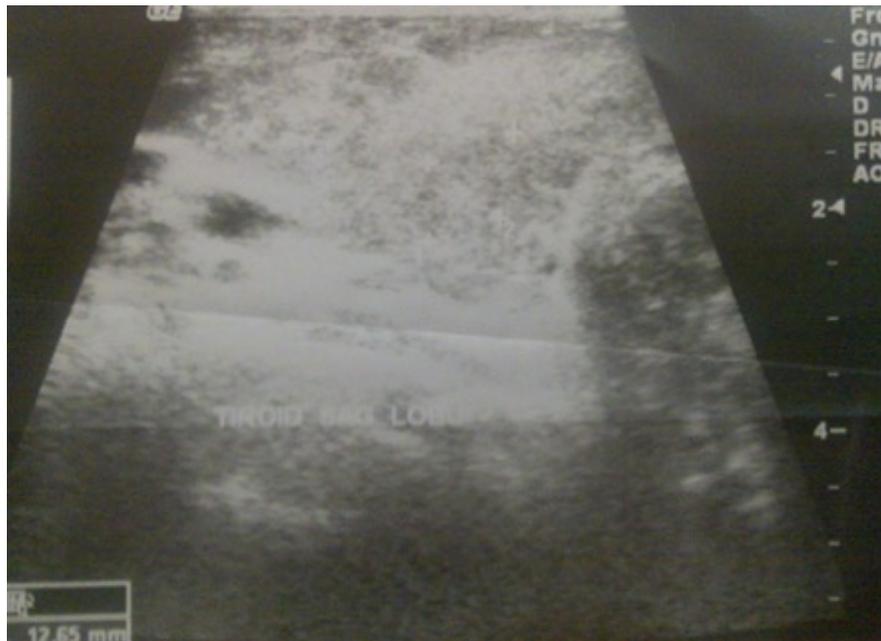


Figure 2A

Ultrasonography of right thyroid lobe



Figure 2B
Ultrasonography of left thyroid lobe



Figure 3
Scintigraphy findings were consistent with the diffuse hyperplastic thyroid gland

Coronal section of orbital magnetic resonance imaging showed mild enlargement of all extraocular muscles of the right eye without involvement of the tendons (Figure 4).

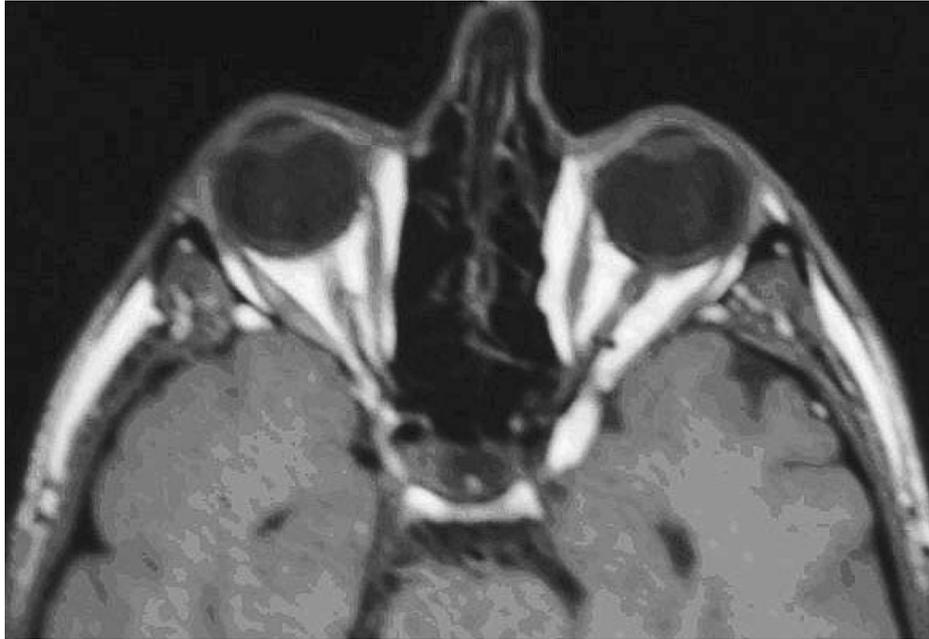


Figure 4

Coronal section of orbital magnetic resonance imaging showed mild enlargement of all extraocular muscles of the right eye without involvement of the tendons

In our multidisciplinary council, ophthalmometric measurements were performed by an ophthalmologist in terms of patient complaining of unilateral exophthalmos as well as many complaints. Total thyroidectomy was decided. Pathology was reported as diffuse goiter. The patient is at the postoperative 4th month and routine follow-up continuing by endocrinology department without any problem.

Case Discussion

Thyroid-associated orbitopathy (TAO) is an autoimmune disease characterized by orbital inflammation involving both fat tissue and extraocular muscles². Bilateral involvement is the usual presentation of TAO which may be asymmetric⁶. Anatomic asymmetry is an unexpected condition and is an interesting feature of the disease. According to Kendler et al., Graves' orbitopathy is three times more frequent in young women than men, although it is more intense in males and older than 50 years, especially in smokers⁷. Unilateral TAO is not more benign than bilateral and it is not bilateral TAO's early presentation⁶. Clinically, unilateral or asymmetric Graves' orbitopathy is very common and can lead to misdiagnosis or unnecessary testing. As in our case, asymmetric exophthalmos should be considered in the differential diagnosis of thyroid orbitopathy in every case. Graves' disease can be diagnosed based on its clinical features, and when it is present with these clinical features, unilateral or bilateral exophthalmos can be thought of as originating from Graves', also systematic examinations will be negative so that orbital imaging and expensive studies are usually not necessary to exclude other orbital diseases. Perrild et al., have proposed diagnostic imaging modalities like computer tomography to eliminate malignancies or other void-forming processes in unilateral exophthalmic patients⁸. Computer tomography and magnetic resonance imaging are necessary to exclude orbital myositis, inflammatory pseudotumor, neoplasm, lymphoma or carotid cavernous fistula^{9,10}. Computer tomography, magnetic resonance imaging, scintigraphy can be used to diagnose ophthalmopathy in Graves' disease^{2,11,8}. Studies in asymmetric grafted patients show that TAO is unilateral exophthalmos in about 15% of the cases^{12,13}. Other causes of asymmetric exophthalmos include orbital tumor and facial trauma¹⁴. Other causes of unilateral proptosis include orbital tumor, inflammation, pseudotumor and carotid cavernous fistula⁶. Exophthalmos/unilateral TAO can be evaluated with magnetic

resonance imaging⁶. Optic neuropathy is very rare among ophthalmopathy¹⁵. Corticosteroids are usually used for Graves' ophthalmopathy. In case of no response, cyclosporine, orbital decompression, and radiotherapy can be tried^{2,7,16}.

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