

Department of Neurology, Medical University of Lublin

JOANNA IŁŻECKA, DOROTA MILANOWSKA, JUSTYNA NOWICKA

*Ocular myasthenia gravis with autoimmune thyroid  
disease – a case report*

Myasthenia gravis (MG) is autoimmune disease caused by the antibody-mediated attack against the skeletal muscle nicotinic acetylcholine receptor (AChR) at the neuromuscular junction. Previous studies suggest that ocular myasthenia gravis (OMG) and generalized myasthenia gravis (GMG) are two different diseases which can be associated with thyroid autoimmune disease (3).

Aarli et al. (1) observed that three of 40 patients with MG had chronic thyroiditis. The thyroid disease preceded MG in two patients, while the third developed a slowly progressive hypothyreosis during the disease. Two of the remaining patients with MG had enlarged thyroid gland with the presence of antibodies to thyroid globulin.

CASE REPORT

A fifty-nine-year-old female patient was admitted to the Department of Neurology, Medical University of Lublin because of diplopia of the left eye and ptosis of the left lid. The prostigmine test was positive, and the evoked potentials demonstrated dysfunction of the neuromuscular junction with postsynaptic myasthenic block. The computed tomography (CT) of the chest showed the enlargement of the thyroid but the thymoma was not present. The magnetic resonance imaging (MRI) and the angio-MRI of the brain did not revealed any vascular malformations or other pathological processes. The examination of the thyroid function showed hypothyreosis. The serum thyroid-stimulating hormone (TSH) level was 6.4 mIU/l (normal range: 0.4–4.9), the free triiodothyronine (T3) – 3.9 pmol/l (normal range: 3.0–7.0), and the free thyroxine (T4) – 14.3 pmol/l (normal range: 12.0–22.0). There was observed the presence of the antithyroperoxidase autoantibodies (TPO Ab) and the antibodies against thyroglobulin (Tg Ab) in the serum of patient. The TPO Ab level was higher than 1000 IU/ml (normal range: 0.0–11.9), and the Tg Ab level was 76.1 IU/ml (normal range: 0.0–33.9). The patient has been treated with Mestinon, Euthyrox, Vinpoton, Zocor and Kalipoz. After the treatment its clinical state was improved.

DISCUSSION

The OMG leads to diplopia, ptosis, and weakness of lid closure. The diagnostic tests are less sensitive for OMG than for GMG. According to Barton et al. (2) about 50–70% patients with OMG can develop GMG. Weissel et al. (5) demonstrated that Tg Ab were positive in 5% of MG patients,

and concluded that autoimmune thyroid disease may be associated with MG but the occurrence of thyroid dysfunction induced by autoimmunity is a very rare phenomenon in MG.

Marino et al. (4) observed that patients with MG and coexisting autoimmune thyroid disease had a mild clinical form of MG, and suggested the presence of two different forms of MG; a mild form with associated autoimmune thyroid disease with frequent ocular dysfunction and rare thymic disease, and a severe form without autoimmune thyroid disease. In their study all patients with primary hypothyroidism associated with positive Tg Ab and TPO Ab were considered to have Hashimoto thyroiditis. The authors suggested that the association of OMG and autoimmune disease might be caused by common autoimmune mechanism which acts through antigens shared by the eye muscles and the thyroid.

#### REFERENCES

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#### SUMMARY

Myasthenia gravis may be associated with other autoimmune diseases. There was presented a patient with ocular myasthenia gravis and coexisting autoimmune thyroid disease. Data from the literature indicate that the association of these two diseases may be caused by the common mechanism.

#### Miastenia oczna z autoimmunologiczną chorobą tarczycy – opis przypadku

Miastenia może występować łącznie z innymi chorobami autoimmunologicznymi. Przedstawiono pacjentkę chorującą na miastenię oczną z towarzyszącą autoimmunologiczną chorobą tarczycy. Dane z piśmiennictwa wskazują na to, że skojarzenie tych dwóch chorób może być spowodowane wspólnym mechanizmem.