

Middle Ear Effusion in Myasthenia Gravis: Case Report

Miyasteniya Graviste Orta Kulak Efüzyonu: Olgu Sunumu

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ABSTRACT

Myasthenia Gravis is a chronic autoimmune neuromuscular disease. It is characterized by blockage of acetylcholine receptors generating muscle contraction at the neuromuscular junction. Symptoms vary in type and severity according to muscles involved and the degree of muscle weakness. Ptosis, diplopia, disequilibrium, change in facial expression, dyspnea and dysarthria may be presenting symptoms. We present a case of Myasthenia Gravis in a young woman with prominent otologic complaints. Palatal muscle involvement particularly tensor veli palatini muscle weakness can lead to eustachian tube dysfunction. Decrease in hearing level, hyperacusis and tinnitus must remind middle ear effusion.

Keywords

Muscle weakness; palatal muscles; otitis media with effusion

ÖZET

Miyasteniya gravis, kronik, otoimmün, nöromuskuler bir hastalıktır. Nöromuskuler bileşkede kas kontraksiyonu meydana getiren asetilkolin reseptörlerinde blokajla karakterizedir. Semptomlar kas tutulumunun şiddetine ve kas zafiyetinin derecesine bağlı olarak değişebilir. Ptozis, diplopi, dengesizlik, yüz ifadesinde değişim, dispne ve dizartri semptomları oluşabilir. Bu makalede belirgin otolojik şikayetleri olan genç, bayan bir miyasteniya gravis olgusu sunuyoruz. Palatal kasların, özellikle tensör veli palatini kasının tutulumu östaki disfonksiyonuna yol açabilir. İştmede azalma, hiperakuzi ve tinnitus orta kulakta efüzyonu düşündürmelidir.

Anahtar Sözcükler

Kas güçsüzlüğü; palatal kaslar; efüzyonlu otitis media

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INTRODUCTION

Myasthenia gravis (MG) is a chronic autoimmune neuromuscular disease. It is characterized by blockage of acetylcholine receptors generating muscle contraction at the neuromuscular junction.¹

Symptoms vary in type and severity according to muscles involved and the degree of muscle weakness. Ptosis, diplopia, disequilibrium, change in facial expression, dyspnea and dysarthria may be presenting symptoms.

We present a case of MG in a young woman with prominent otologic complaints. We had İNSTİTÜTİONAL REVİEW BOARD approval and informed consent from the patient.

CASE REPORT

A 24-year-old female patient with the complaints of aural fullness, pressure sensation, difficulty in hearing and tinnitus lasting for two months was referred from neurology department. She had thymectomy two years ago with the diagnosis of MG and was under pyridostigmine (360 mg) and prednisolone maintenance treatment.

Otolaryngologic examination revealed middle ear effusion in both ears. Pure tone audiogram proved bilateral mild conductive hearing loss (right and left ear pure tone averages were 28 dB and 26 dB respectively) (Figure 1). Tympanometry was type B. Acoustic reflexes were absent bilaterally. Nasal endoscopy was ordinary with no evident septal deviation, turbinate hypertrophy, nasopharyngeal pathology or upper airway infection. She was followed with systemic and local nasal decongestants (pseudoephedrine HCL and xylometazoline HCL) in reduced doses not to potentiate the side effects of MG treatment with no improvement in symptoms and clinical findings for three weeks. Antibiotics were not preferred middle ear effusion was managed with bilateral paracentesis and ventilation tube (Paparella type 2) insertion. Aural fullness and tinnitus disappeared after insertion of ventilation tubes. Tubes were extruded on the 8th month of follow-up. On the 15th month after extrusion of tubes she had recurrent middle ear effusion with the same complaints unresolving in spite of the medical treatment. Her ear complaints and signs disappeared with the insertion of second set of ventilation tubes. The symptoms and audiological tests were in normal range with no air-bone gap and bilateral 10dB average hearing level after the extrusion of ventilation tubes in 5th month of insertion (Figure 2). Tympanogram was type A and reflexes were positive bilaterally. She is in the 12th month follow-up without recurrent or persistent middle ear effusion.

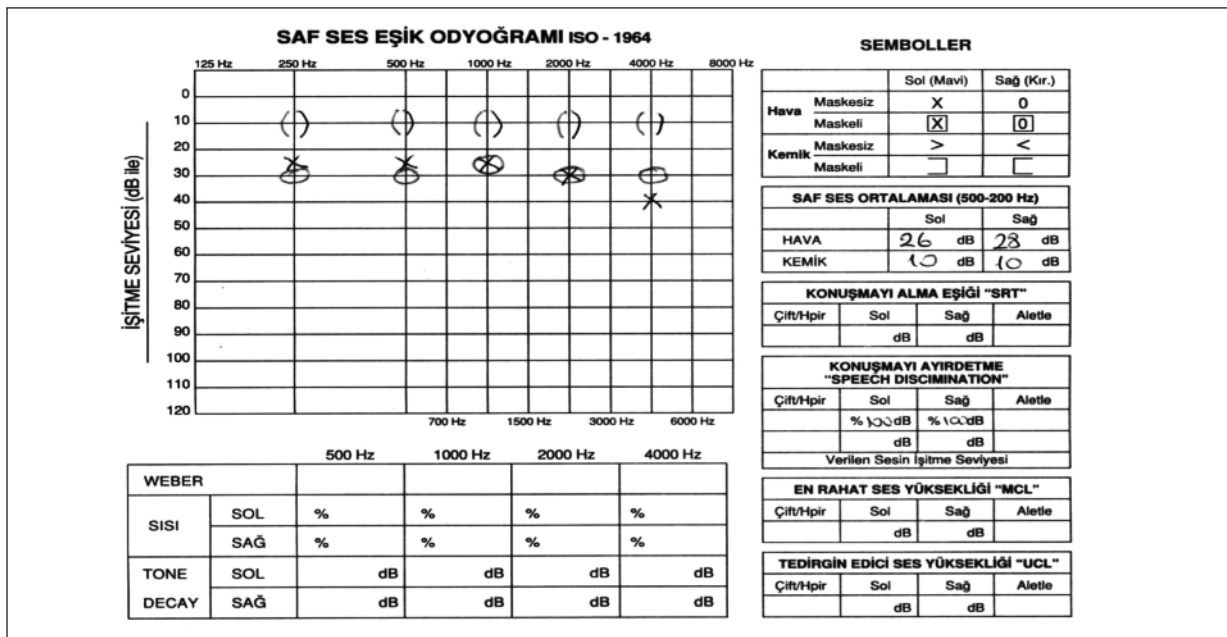


Figure 1. Preoperative audiogram.

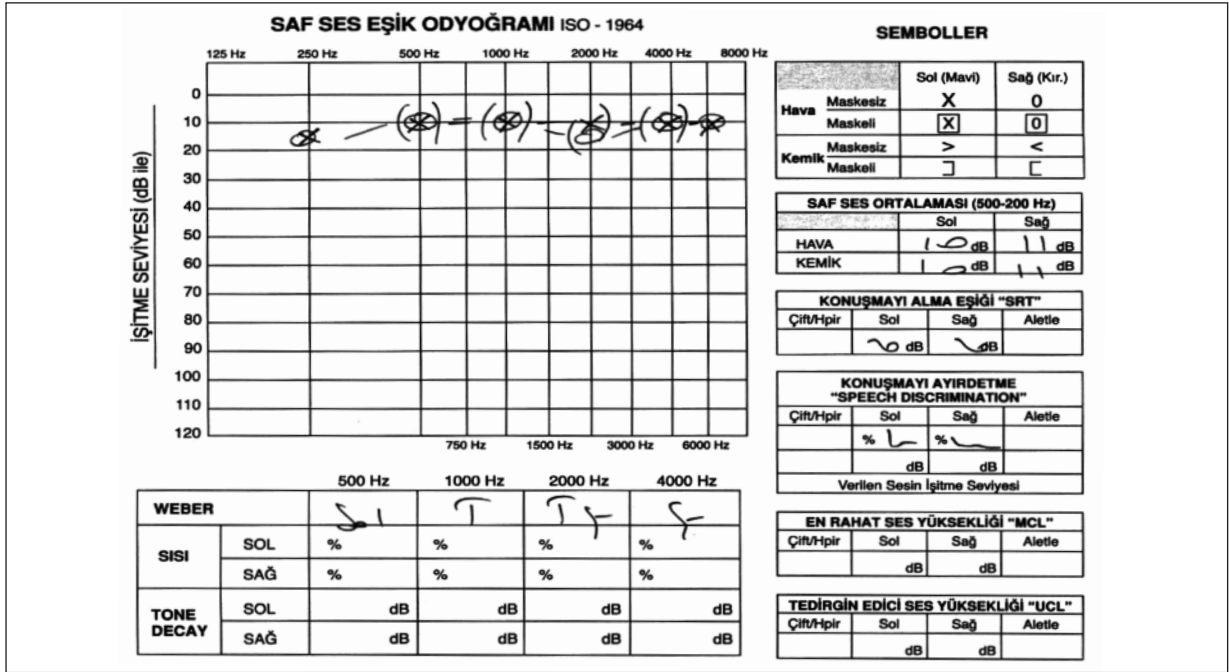


Figure 2. Postoperative audiogram.

DISCUSSION

MG is an autoimmune disorder in which antibodies form against acetylcholine (ACh) nicotinic postsynaptic receptors at the myoneural junction. Reduction in the number of ACh receptors cause progressively reduced muscle strength.¹ Ocular muscles are involved in %85 of patients.² In %6-17 patients, presenting symptoms are dysphagia and dysarthria due to oropharyngeal muscle involvement. Palatal muscle involvement, particularly tensor veli palatini muscle weakness, can lead to Eustachian tube dysfunction. Decrease in hearing level, hyperacusis and tinnitus must remind middle ear effusion.^{3,4} Medical treatment including pseu-

doephedrine HCL is not preferred due to side effect augmentation potential together with MG treatment regimen. The aim of therapy in MG is to reduce muscle weakness with anticholinesterase agents such as neostigmine and pyridostigmine and to improve neuromuscular transmission. Additional involved site specific management is required especially when symptoms affect life quality of the patient. Close follow-up with paracentesis and ventilation tube insertion is appropriate in case of persistent middle ear effusion in MG patients. Multiple ventilation tube insertion can be required if middle ear effusions tend to recur or persist during the course of the illness. In this patient, the recurrence of middle ear effusion was managed with repeated ventilation tube insertions.

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