Case Report
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# Case of Myasthenia Gravis Admitted With Complaints of Difficulty Swallowing

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## Abstract

Myasthenia gravis (MG) is a neuromuscular autoimmune disease that occurs with antibody development against nicotinic acetylcholine receptors. The 19-year-old female patient was admitted to the emergency service with the complaint of difficulty in swallowing for 1 week. There was no history of abnormality in the patient. The uvula sola was deviated in the physical examination of the patient. The obtained brain, cervical and thorax CT and the diffusion MRI of the patient were normal. Consultation was requested for the patient from neurology, and the patient was hospitalized at the neurology clinic with the pre-diagnosis of myasthenia gravis. The case that acutely occurs in myasthenic patients and is characterized by severe loss of strength and respiratory deficiency is known as myasthenic crisis (MC). The diagnosis of MC must be confirmed by considering the patient's history and signs of physical and neurological signs. Myasthenia gravis is an autoimmune disease that is concerned with the neuromuscular junction, and it may lack a diagnosis in the initial periods. We should include myasthenia gravis as a pre-diagnosis in patients with difficulty in swallowing that are admitted to emergency services as a result of upper respiratory infections such as acute pharyngitis and acute tonsillitis.

**Keywords:** Uvula deviation, emergency medicine, myasthenia gravis

## Introduction

Myasthenia gravis (MG) is a neuromuscular autoimmune disease that occurs with antibody development against nicotinic acetylcholine receptors. While its onset is observed the most frequently in the age intervals of 15-30 and 50-75, it maybe seen in every age group.The main clinical finding of myasthenia gravis is muscle weakness that increases in cases of mobility, is fixed partly or completely by resting and shows fluctuations in its severity and distribution in time. Weakness of eye muscles is noticeable in most patients, and this condition is observed with cases of diplopia and ptosis[1]. Its treatment includes anticholinesterases, corticosteroids, plasmaphereses and immune system suppressants[2]. We found it worth reporting a case of a patient that we hospitalized at the neurology service with the pre-diagnosis of myasthenia gravis who came up with complaints of difficulty in swallowing.

## Case

The 19-year-old female patient was admitted to the emergency service with the complaint of difficulty in swallowing for 1 week. There was no history of abnormality in the patient. The uvula sola was deviated in the physical examination of the patient (Figure-1). The patient's neurological system examinations and other system examinations were normal. The vital parameters of the patient were as fever: 36.4°C, heart rate: 80/min, BP: 125/80 mmHg, respiratory rate: 20/min. The hemogram and biochemical analyses of the patient were normal. The obtained brain, cervical and

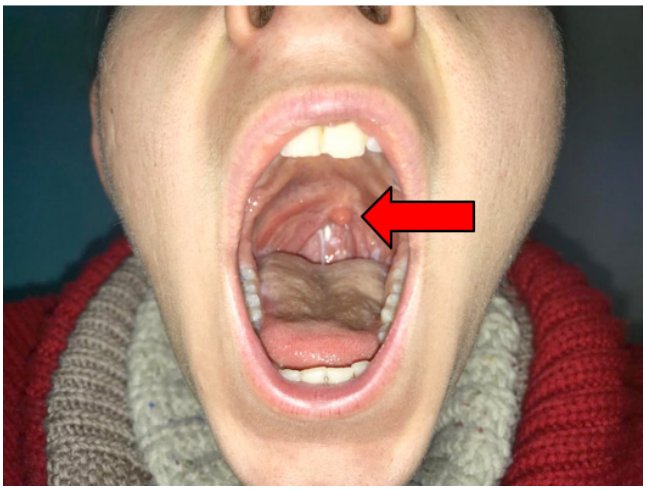

**Figure 1.** The uvula of the patient deviated to the left.

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thorax CT and the diffusion MRI of the patient were normal. Consultation was requested for the patient from neurology, and the patient was hospitalized at the neurology clinic with the pre-diagnosis ofmyastheniagravis.

## Discussion

The case that acutely occurs in myasthenic patients and is characterized by severe loss of strength and respiratory deficiency is known as myasthenic crisis (MC). The most frequent cause of mortality in these patients is MC. MC may develop in the rate of 15-20% in MG patients. Respiratory deficiency that develops as a result of MC frequently required intubation, and these patients usually need to be monitored in intensive care conditions[3].

The diagnosis of MC must be confirmed by considering the patient's history and signs of physical and neurological signs. The causes of crisis should be considered in a case with suspicion of MC, and the possibility of mechanical ventilation should be assessed. Additionally, excessive drug intake may lead to cholinergic crisis. Distinguishing MC from cholinergic crisis is based on the appropriate anamnesis and neurological examination findings. Electrophysiological tests may be required in cases where MG cannot be diagnosed for definitive diagnosis[4].

The most prominent reason of MC is infections by 30-40%. MC may be related to trauma and surgery, changes in the medications that are used (pyridostigmine and corticosteroids), some drugs that are newly started to be used (aminoglycosides, quinidine, beta blockers, macrolides, lithium, chlorpromazine, calcium canal blockers, lidocaine, etc.), irregular usage of medication by the patient[3]. The reason for MC-related acute respiratory failure is the occurrence of alveolar hypoventilation by muscle strength decrease, as well as difficulty in swallowing, development of secondary aspiration as a result of the loss of the coughing reflex and the involvement of oropharyngeal muscles involving aspiration pneumonia. In our case, the patient did not have any complaints besides difficulty of swallowing.

Successful outcomes are achieved by mechanical ventilation support in the treatment of MC patients. While there are studies in terms of the need for intubation, tracheostomy, mortality rates and durations of intensive care and hospitalization in the treatment of respiratory deficiency based on neuromuscular diseases, there are studies that reported that this condition increases these durations[5,6].

While myasthenia agravis patients are previously diagnosed, it is possible to encounter a case that is undiagnosed as in our case, though it is rare.

## Conclusion

Myasthenia gravis is an autoimmune disease that is concerned with the neuromuscular junction, and it may lack a diagnosis in the initial periods. We should include myasthenia gravis as a pre-diagnosis in patients with difficulty in swallowing that are admitted to emergency services as a result of upper respiratory infections such as acute pharyngitis and acute tonsillitis.

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