A Case Report of Atypical Presentation of Myasthenia Gravis

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Abstract

A group of autoimmune illnesses called anti-acetylcholine receptor antibody-mediated neuromuscular junction damage includes myasthenia gravis (MG). It is a fairly rare condition that affects more women than men. Ptosis, and, less frequently, dysphagia or dysphonia, are the characteristic symptoms. Although it's uncommon, this illness can impact any skeletal muscle, such as the neck or the muscles of the proximal limbs. No cases of MG manifesting as a solitary neck weakness have been documented. A female patient, age 79, was seen with neck weakness and minor discomfort that got worse over the course of the day.Only the cervical muscles' motor strength was diminished upon examination. Except for anti AchR antibodies (binding Ab 13.04 nmol/L, blocking Ab 54% while modifying Ab 84%) with mildly raised (CPK) concentrations (360 U/l), all radiological and laboratory tests were within normal ranges. Pyridostigmine, which was supplied to the patient as 60 mg QID, quickly and significantly relieved the patient's neck weakness. Since taking the drug for two years, the patient has indeed been stable. MG mainly affects females in their middle years, but it sporadically affects older people as well. To cut down on expenses and morbidity associated with investigations, physicians should have a high degree of suspect for myasthenia manifesting with fatigable muscle weakness.

Keywords: neck, weakness, atypical, elderly

Introduction:

An established autoimmune condition known as MG is frequently found in centre female populations. The type-II antibody reaction that causes this disease attacks the myoneural junction and damages the post-synaptic membrane by complement fixation. These antibodies are targeted towards post-synaptic nicotinic acetylcholine receptors. A NM weakness without stiffness finally develops from the loss of action potential transmission across the neurons as a result. The extraocular muscles are traditionally the target of anticholinergic autoantibodies, which causes varying muscular fatigability and, most commonly, diplopia and drooping of eyelids, which is usually worse at night. Moreover, half of the cases are of this nature. Bulbar weakness has rarely been documented as the initial symptom, more frequently in the senior male population, progressing to dysphagia and dysarthria.

Case Presentation:

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A thorough evaluation indicated normal power in the bilateral lower and upper but just 3/5 strength in the neck muscles. The warnings of Spurling and Lhermitte were unfavourable. Impairement of sensory system was not detected. Babinski was negative, and reflexes were symmetrically 2+ throughout. Degenerative joint disease, spinal pressure fracture, dystrophies of muscles, neurological disorder, and paraneoplastic process were among the differential diagnoses at this point. Initial blood tests came back within the expected ranges. The patient had blood tests for metabolic panel and inflammatory indicators, as well as a cervical spine X-ray. The X-ray was normal, and the comprehensive metabolic panel and complete blood count (CBC) revealed no indications of infection or inflammation (CMP). With the exception of muscle inflammation, all tests of liver function (LFTs), including were within normal ranges. Additionally, autoimmunity indicators were normal. The CPK levels were mildly increased at 375 U/l (normal 22-198 U/l), and the ESR was 17 mm/hr.

Two weeks later, the patient returned with a worsening neck weakness and difficulties keeping her neck motionless. The X-ray Chest was normal and showed no thymoma symptoms. The results of the tests are compatible with the diagnosis of myasthenia gravis: the anti AchR antibody was 13.04 nmol/L (normal: 0.40 nmol/L), the blocking antibody was 54% (normal: 26%), and the modulating antibody was 86% (normal: 45%). Instead of doing electromyography to diagnose myasthenia, we chose to administer cholinergic agonists based on the clinical picture and laboratory findings.

The patient started receiving pyridostigmine medication (60 mg QID). We told her to check back in three days. After starting pyridostigmine medication, her symptoms dramatically improved. The sickness did not progress rapidly. Since then, the patient has been stable on the medicine and has not experienced a return of weakness. There haven't been any documented negative consequences of treatment. Without experiencing any difficulties with her eyesight, swallowing, speech, or gait, the patient went back to her old baseline lifestyle.

Discussion:

Although myasthenia gravis occurs as the most prevalent neuromuscular junction ailment, the instance described above is an extraordinarily uncommon manifestation of a rare condition [3]. The significance of having a high diagnostic index of suspect for myasthenia in older patients with unexplained neck or bulbar weakness, even in the absence of characteristic fluctuating weakness, is highlighted by this case [2]. Myasthenia is characterised by weakness brought on by defective action potential propagation brought on by impairment to post-synaptic acetylcholine receptors, which prevents muscles from depolarizing [4]. MG occurs less frequently each year,

with 10–20 recorded cases per million people [1]. The disease has a bimodal distribution, peaking in the second or third decade in women and again in the fourth or eighth decade in the male population.

The muscles around eye and the muscles involved in the process of mastication are frequently affected, though to a lesser extent, and this condition typically manifests as variable and fatigable skeletal muscular weakness [6]. There have been cases of myasthenia in older males that manifests as dysphagia and quickly progresses to lung failure. Any group of muscles, including those in limb (especially the proximal ones and neck, can be afflicted in addition to the paradigmatic muscles that are involved [5].

There have been reports of significant diagnostic delays or frequent misdiagnoses in older individuals [7]. Among comparison to younger age groups, the timeframe for identification in the aged (>60 years) was around 5 months. Neck weakness in elderly women may be a symptom of metastases, osteoporotic vertebral fractures, disc herniation, and degenerative joint disease. Myasthenia is believed to be underdiagnosed in senile individuals because there are so many potential causes of neuromuscular symptoms, such as cerebro vascular accidents, Parkinson's disease, Horner syndrome [8].

Treatment method for patients of myasthenia gravis is the use of anticholinesterases (Indirect Acting) such pyridostigmine/neostigmine [7]. The desired rate of survival in senior populations is directly correlated with extensive anticholinesterase and steroid therapy . Thymectomy is a suitable alternative for younger people to treat symptoms, although it is not often preferred in older patients, especially those over 60 . Elderly people frequently respond well to treatments overall

Conclusions :

There haven't been any reports of myasthenia in older females that simply manifest as neck weakness. The danger of misdiagnosis in the elderly increases the likelihood of additional complications. In conclusion, this case demonstrates that, even in the absence of traditional symptoms, myasthenia should be taken into account as a possibility in older patients who report with neck weakness. Myasthenia should be properly diagnosed and treated as soon as possible.

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ETHICAL CONSENT :

Informed consent was taken from the patient regarding this study .

FUNDING :

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CONFLICT OF INTEREST :

The authors declare that there was no conflict of interest.

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