Myasthenia Gravis Masquerading as Cardiopulmonary Pathology: A Case Report

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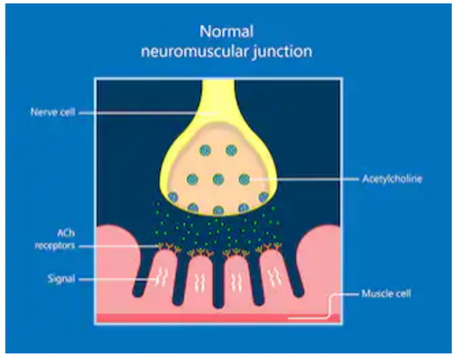

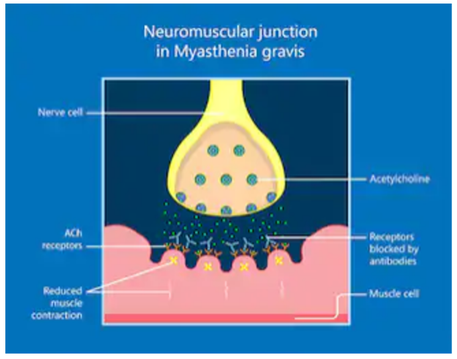

INTRODUCTION

Myasthenia gravis (MG) is one of the most common neuromuscular diseases and actually has very few mysteries left to discover. That being said, being common does not necessarily equate to being easily recognized.. Because of the fluctuating skeletal muscle symptoms that may not all present equivocally or even at the same time, MG often goes undiagnosed, often leading to a delay in diagnosis for months or sometimes years. The purpose of this study is to present a case of newly-diagnosed MG which evaded diagnosis multiple times, likely due to fluctuating symptoms and misread presenting symptoms at different individual encounters.

CASE DESCRIPTION

An 84-year-old female presented with shortness of breath, neck muscle pulling, and worsening generalized weakness of two days duration. She was recently discharged from the hospital after a negative cardiac workup for heart palpitations, saw her cardiologist this afternoon, and was unable to stand up from her porch upon arriving home. Repeated cardiac workup at this presentation was negative. She exhibited an abnormal gait, difficulty swallowing food, and an episode of choking. She was also recently prescribed glasses with prism lens by her optometrist due to double vision. Her examination was notable for binocular diplopia without her glasses, decreased proximal muscle strength in bilateral upper and lower extremities, pressured speech, ptosis and ataxia. Suspecting a neuromuscular diagnosis, acetylcholine receptor antibodies were ordered and returned positive, indicative of MG. Physical therapy, pyridostigmine, and intravenous immunoglobulin were initiated, followed by inpatient rehabilitation.

DISCUSSION

How does Myasthenia Gravis Elude Diagnosis?

VAGUE FLUCTUATING SYMPTOMS

Although MG is not an altogether rare disease, it is one that can often elude diagnosis because of vague fluctuating symptoms that might not all be present at one time. This means that each provider who sees them might only get a piece of the puzzle at each separate presentation. The optometrist saw the diplopia, the cardiologist generalized weakness, the emergency department shortness of breath, the medicine team proximal muscle weakness, the nurse ataxia and dysphagia, and the neurologist ptosis. Each physician only saw the piece of the puzzle that was presented to them, meaning that nobody received the whole picture. Beekman et al found that 26% of MG patients have had an inappropriate non-specific investigation prior to their final, eventual, diagnosis. This incomplete picture shows the necessity of obtaining a thorough history.

PATHOLOGIC MIMICRY

Another diagnostic challenge of MG includes mimicry of related diseases that have similar symptomatology. Numerous times in the literature, MG has been mistaken for other neurologic pathologies, such as a stroke, encephalopathy, Guillain-Barre syndrome, botulism, heavy metal poisoning, muscular dystrophy, or multiple sclerosis. The aforementioned patient's case is a prime example of pathologic mimicry, as the emergency department and cardiologist both thought that her symptoms were most likely cardiac in nature. With a past medical history of hypertension, hyperlipidemia and recent hospitalization for heart palpitations, this really was not a bad guess. This led to them pursuing cardiac pathologies, ordering chest x-rays, EKGs, troponins, etc. Because of the fluctuating symptoms and pathologic mimicry, Beekman et al found that 13% of MG patients have had a five or more-year delay in diagnosis, leading to further progression of the disease, when it could have been treated, and a subsequent decreased quality of life.

CONCLUSIONS

In conclusion, although MG is not an uncommon neuromuscular disease, it can be difficult to diagnose. This difficulty results from vague fluctuating symptoms and the potential for pathologic mimicry, leading physicians down unrelated rabbit holes that delay diagnosis. A patient with MG would benefit from a broadened approach taking into account all previous hospital visits, doctors' appointments and symptomatology - as opposed to a limited view that narrows in on any one symptom present at that encounter. With cases such as these, it is essential to obtain a complete history, combining the seemingly unrelated pieces into the completed puzzle.

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