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Mini Review

A Missed Diagnosis of Myasthenia Gravis in a Middle-Aged Man & The Importance of Neurological Review

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Abstract

Objectives: To discuss the diagnostic challenges in a case of Myasthenia Gravis (MG), which presented multiple times with symptoms of diplopia and muscle weakness, ultimately leading to a delayed diagnosis until a neurological review. **Methods:** We present the case of a middle-aged man who experienced recurrent episodes of double vision, progressive limb weakness, and bulbar symptoms. Despite multiple hospital visits the diagnosis of Myasthenia Gravis was only made after a targeted neurological evaluation.

Introduction

Myasthenia Gravis (MG) is a neuromuscular disorder characterized by fluctuating muscle weakness, often affecting ocular and bulbar muscles. The diagnosis can be delayed, especially when initial presentations are subtle or mimic other neurological conditions. In this case, we describe a patient whose MG diagnosis was missed over several months, highlighting the importance of clinical vigilance and the need for a neurology review when symptoms are not explained by more common pathologies.

Case Presentation History

My patient presented to the hospital initially with double vision and a sensation of pressure around the eyes. His visual acuity was preserved, intraocular pressures was normal, and a CT scan of the head showed no abnormalities. He also mentioned bilateral generalised weakness in both his arms and legs. Following a review by the ophthalmology team, he was diagnosed with third cranial nerve palsy with pupil sparing, and an MRI was ordered due to a family history of aneurysms, which subsequently returned normal.

A few months later he presented again with complain of recurrent diplopia and worsening weakness in his lower limbs. He reported difficulty with fine motor tasks such as handling utensils and noticed a significant reduction in his exercise tolerance, managing only 50 yards before becoming fatigued. He also had trouble speaking and chewing for prolonged periods, experiencing jaw fatigue after speaking for a few minutes. However, no visual field defects were noted, and cranial nerve examination was normal. Despite his intact reflexes and the absence of sensory deficits, the patient's grip strength was reduced.

Examination

When seen by neurologist, the patient demonstrated fatigue when counting to 100, and was unable to walk more than 15-20 yards without stopping. He described a sensation of his legs feeling like "jelly" after walking 200 yards with his grandchildren, and he experienced choking while eating shortly afterward. Diplopia was noted during left and right lateral gaze.

Investigations

Given the patient's symptoms and clinical presentation, a diagnosis of Myasthenia Gravis was considered. The following investigations were conducted: Acetylcholine receptor antibodies and MuSK antibodies were sent to confirm the diagnosis. CT chest was

performed to rule out thymoma, with no abnormalities detected. Repetitive nerve stimulation (RNS) studies were scheduled at a specialist center for further confirmation.

Treatment and Outcomes

The patient was started on Pyridostigmine, initially at 30 mg three times daily, leading to significant improvement in both speech and swallowing. His dose was increased to 60 mg three times daily to further control his symptoms. He was also commenced on oral prednisolone, which was tapered to 10 mg once daily, and azathioprine 25 mg once daily was added for long-term immunosuppression. His symptoms continued to improve, with plans for further diagnostic confirmation through repetitive nerve stimulation studies at a specialist center.

Discussion

This case illustrates the diagnostic difficulty posed by Myasthenia Gravis, particularly when the primary symptoms involve ocular and bulbar muscles. Early presentations can be misleading, as in this patient's case, where diplopia and a diagnosis of third cranial nerve palsy masked the underlying neuromuscular disorder. It was only after a thorough neurological examination and consideration of muscle fatigue patterns that Myasthenia Gravis was suspected.

The delay in diagnosis in this patient reflects the broader challenge of diagnosing Myasthenia Gravis in the absence of clear-cut early signs. Although diplopia is a common initial presentation, the associated bulbar symptoms such as difficulty chewing and speaking were under-recognized initially. The patient's description of weakness in fine motor skills and exercise intolerance, alongside his "jelly-like" leg sensation, were pivotal in raising suspicion for Myasthenia Gravis.

Once the diagnosis was made, treatment with Pyridostigmine and immunosuppressive agents like prednisolone and azathioprine led to a marked improvement in the patient's symptoms. This case emphasizes the importance of considering Myasthenia Gravis in patients with unexplained, fluctuating muscle weakness, particularly when cranial nerve involvement is suspected.

Conclusion

This case underscores the importance of considering Myasthenia Gravis in patients with fluctuating muscle weakness, particularly when symptoms involve both ocular and bulbar muscles. Early involvement of neurology and timely initiation of treatment can lead to substantial symptom improvement and prevent complications.

Patient Consent

Written informed consent was obtained from the patient for the publication of this case report.