International Journal of Science and Research (IJSR)
ISSN: 2319-7064
SJIF (2022): 7.942

Unusual Presentation of Bulbar Myasthenia Gravis in a Young Adult

Anju Elizabeth Mathai[1*], Aalam Zaib Aashiq[2], Siamik Salahi[3]

[1]Department of ENT, Sur Hospital, Ministry of Health, South Sharqiah Governorate (Corresponding Author)

[2]Department of Neurology, Internal Medicine, Sur Hospital, Ministry of Health, South Sharqiah Governorate

[3]Department of ENT, Sur Hospital, Ministry of Health, South Sharqiah Governorate

Abstract: ***Myasthenia gravis is an autoimmune motor neuron disorder characterized by the weakness in the voluntary muscles, often presenting with ocular or bulbar symptoms. We report the case of a young adult female presenting with bulbar symptoms such as nasal regurgitation and dysphagia. Initial misdiagnosis led to delayed treatment but further evaluation confirmed Myasthenia gravis leading to successful management and symptom improvement. This case highlights the importance of considering Myasthenia gravis as a differential diagnosis for young patients with bulbar symptoms.***

Keywords: Myasthenia gravis, bulbar symptoms, young adult autoimmune disorder, case study

1. Introduction

Myasthenia gravis is an autoimmune disease in which the body produces autoantibodies that bind to acetylcholine receptors on skeletal muscles. This causes muscle weakness and fatiqability. Common presenting symptoms include the involvement of the ocular system resulting in ptosis and diplopia. When bulbar system is involved, patient presents with dysphagia or dysarthria occurring in approximately 15% of the patients. These symptoms commonly occur in elderly males[3].Here we discuss an unusual presentation of myasthenia gravis presenting with nasal regurgitation, dysphagia and dysphonia in a young lady posing a diagnostic challenge[4].

The significance of this study lies in raising awareness of atypical presentations of Myasthenia gravis particularly in younger populations. Where misdiagnosis can lead to treatment delays and poorer outcomes. This case underscores the need for comprehensive evaluation in patients with unexxplained bulbar symptoms.

2. Case Report

A 22year old lady presented to primary care center with progressive fluid regurgitation since 2 weeks, difficulty in swallowing solid and liquid foods, change in voice and right side facial pain. She was diagnosed and treated as Bell's palsy and acute sinusitis for these same complaints from elsewhere. The patient was referred to us for fiber optic laryngoscopy. Upon clinical assessment and examination, her symptoms did not correlate and no abnormality noted. She was referred to neurologist for a second opinion. Work up done by neurologist included blood investigations like acetylcholine receptors, anti musk antibodies, antinuclear antibodies, complement levels, Computed tomography chest and magnetic resonance imaging of brain. Her results indicated Acetyl choline receptor antibodies greater than 100.000nmol/L: however antimusk antibodies were negative .HRCT chest showed no evidence of thymic pathology. Apart from this, no other abnormalities were noted in blood investigations nor in ultrasound abdomen or MRI brain.

She was admitted and started on intravenous immunoglobins, pyridostigmine and azathioprine. Repetitive nerve stimulation test result from tertiary center showed significant decrement with low and high frequency stimulation. Findings suggest a neuromuscular postsynaptic transmission defect, most probably myasthenia gravis. She was reviewed after 1 month and her symptoms had improved

3. Discussion

Myasthenia gravis (MG) is an autoimmune disorder that occurs due to IgG autoantibodies against the postsynaptic acetylcholine receptors on skeletal muscles resulting in impaired transmission at the neuromuscular junction[5].

Although the distribution of the diseases varies widely, the worldwide estimated incidence ranges[5] from 0.3 to 2.8 per 100,000 and the median prevalence is 10 per 100,000.

Clinical presentation of the disease varies widely among patients. Extra ocular muscle weakness, diplopia and ptosis are present in 90% of patients diagnosed with myasthenia gravis[3,4] these being the initial presenting symptoms in 50%. In our case, patient had facial pain and weakness in the beginning which was misdiagnosed as Bell's palsy and acute sinusitis and was treated for it.

Myasthenia gravis can occur at any age but typically occurs in a bimodal distribution. The peak incidence[3] is at 30 years in female and 65 years in males. In addition, myasthenia gravis can be divided into late onset and early onset. Early onset contributes to 65-70%. late onset peaks at 70-80 years, frequently presents with bulbar symptoms such as dysphagia, dysarthria and dysphonia. In our case, these symptoms were the main complaints presented by the patient. This case highlights the importance of suspecting myasthenia gravis in young women that can present as dysphagia addressed in particular to otolaryngologist.

Most people with myasthenia gravis have antibodies directed against the acetylcholine receptor (AchR). However, about 10 to 15% of people with myasthenia gravis do not have this AchR antibodies, then an antiMusk antibody test should be done. Estimates of the proportion of people with myasthenia gravis who are negative for AchR antibodies but positive for antibodies to Musk range from 6% to 50%.However,a negative result does not rule out myasthenia gravis.In about 6 to 10% of MG cases ,neither AchR nor Musk antibodies are present[6].

Myasthenia gravis is a potentially serious but treatable disease and therefore, we emphasize the need to consider it in the differential diagnosis of dysphagia. Timely diagnosis and management is necessary to avoid complication like myasthenia gravis crisis and respiratory failure.

4. Conclusion

This article illustrates a diagnositic challenge of bulbar myasthenia gravis in a young adult, emphasizing timely consideration of Myasthenia gravis in differential diagnosis for similar symptoms. Early recognition and treatment are crucial to prevent serious complications and improve patient outcomes.

References

[1] Dysphagia and dysarthria: unusual presentation of Myasthenia Gravis Ferreira S, Lage P, Claro I, Alcântara J, Nunes J, Nobre Leitão C Acta Med Port. 2007 Sep-Oct;20(5):463-6. E pub 2008 Jan 24 PMID : 18282445 Portuguese.
[2] Myasthenia gravis: 'the otolaryngologist's perspective' Salazar Cabrera C, de Saa Alvarez Md Mdel R, Aparicio Pérez MS, Marcos Calle J, García García B.Am J Otolaryngol. 2002 May-Jun;23(3):169-72. doi: 10.1053/ajot.2002.123454.PMID: 12019486 Review.
[3] Cranial Nerve IX and X Weakness: An Unusual Initial Presentation of Myasthenia Gravis. Balabbigari N. et al. Am J Case Rep, 2020; 21: e92375
[4] Montero-Odasso, Dysphonia as First Symptom of Late-Onset Myasthenia Gravis. J GENINTERN MED 2006; 21:C4–C6.
[5] Khan A, Khan M, Kundi T A, et al. (August 04, 2021) A Diagnostic Dilemma of Dysphonia: A Case Report on Laryngeal Myasthenia Gravis. Cureus 13(8): e16878. DOI 10.7759/cureus.1687
[6] Koneczny, Cossins,Vincent 2014 January. The role of muscle specific tyrosine kinase (Musk) and mystery of Musk myasthenia gravis .Journal of Anatomy 2020.