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"MY ASTHENIA TO BREATH IS VERY GRAVIS"

Ivan Figueroa
Department of Medicine, San Juan City Hospital, San Juan, Puerto Rico

Daniel Font
Department of Pulmonology and Critical Care, San Juan City Hospital, San Juan, Puerto Rico

Ricardo Fernandez
Department of Pulmonology and Critical Care, San Juan City Hospital, San Juan, Puerto Rico

Hiram Maldonado
Department of Pulmonology and Critical Care, San Juan City Hospital, San Juan, Puerto Rico

Maria Betancourt
Department of Medicine, San Juan City Hospital, San Juan, Puerto Rico
Department of Pulmonology and Critical Care, San Juan City Hospital, San Juan, Puerto Rico

Monica Rosado
Department of Medicine, San Juan City Hospital, San Juan, Puerto Rico

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Abstract: Myasthenia gravis is an autoimmune and neuromuscular disease characterized by proximal muscle weakness, ptosis, and diplopia.[1] This condition has been infrequently linked as a cause of vocal cord palsy, presenting clinically with acute respiratory distress necessitating mechanical ventilation.[2]

CASE PRESENTATION

A 30-year-old woman with a past medical history of hypertension and asthma presented to the Urgency Room complaining of shortness of breath and chest tightness for one day. The patient also referred hoarseness and cough productive of white sputum. She denied fever, chills, night sweats, sick contacts, chest pain, palpitations, orthopnea, or recent ravel.

For the past 4 years, the patient has had recurrent pulmonary embolisms and admissions for different causes, needing endotracheal intubation and mechanical ventilation. The patient also has had multiple visits to the Urgency Room due to dysphagia.

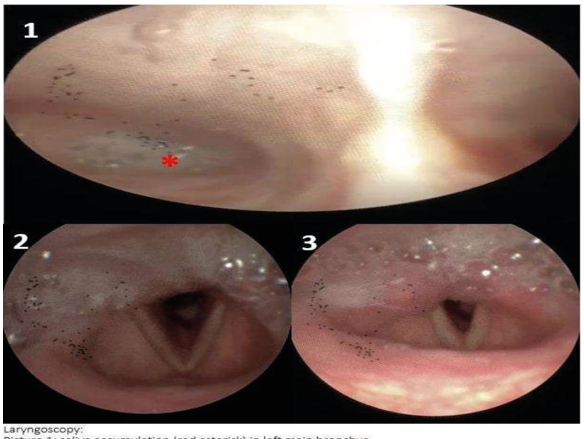
On physical examination, she presented with hypertension, tachycardia, bilateral wheezing, and transmitted sounds from upper airway.

Laboratory findings were remarkable for moderate hypoxemia, respiratory acidosis, and hypomagnesemia.

Chest X-ray revealed bilateral peribronchial cuffing, patchy ground glass and confluent opacities, and blunted left costophrenic angle with pleural effusion. Chest Computerized Tomography scan with intravenous contrast suggested bilateral pneumonic changes and bilateral pulmonary embolism.

The patient was admitted to the Medicine Floor with diagnosis of Pulmonary Embolism and Asthma Exacerbation. Although the patient was managed accordingly, she presented with acute respiratory distress on day 2 of admission, necessitating endotracheal intubation with mechanical ventilation, and was transferred to the Intensive Care Unit.

On day 5 of admission, an Ears, Nose and Throat specialist (ENT) was consulted to search for the cause of the multiple respiratory distresses, along with a year-long history of dysphagia and hoarseness. ENT ordered a laryngoscopy, that showed vocal cord paralysis with severe aspiration of saliva, illustrated in pictures 1, 2 and 3.



Laryngoscopy:
Picture 1: saliva accumulation (red asterisk) in left main bronchus
Pictures 2 & 3: vocal cords unable to close

At day 7, Neurology was consulted to evaluate the causes of vocal cord paralysis. The neurologist noted upward gaze fatigability, limited eye upward movement and convergence, fatigability on upper extremities, and positive "ice pack" test. He ordered a hypercoagulable and autoimmune work up, which were only positive for anti-acetylcholine receptor antibodies, and Brain and Neck MRI with and without IV contrast, that showed an asymmetric medialization of the left vocal cord, suggesting vocal cord paralysis.

After appropriate diagnosis of Vocal Cord Paralysis Secondary to Myasthenia Gravis, and prompted treatment, the patient showed an impressive clinical improvement, and has never recurred since.

DISCUSSION

Respiratory impairment in Myasthenia Gravis is mostly due to weakness of the diaphragm and the intercostal muscles.[3] Functional upper airway obstruction caused by vocal cord paralysis is a rarely described manifestation of Myasthenia Gravis[2], and as in this patient, can finally end in respiratory failure. Different triggers[1] like pregnancies, infections, asthma exacerbations, intravenous magnesium replacements, among others, were not identified and linked at time. An interdisciplinary approach through ENT and Neurology consultations helped to figure out the hidden problem. Prompt diagnosis and appropriate management led to resolution of symptoms and recurrence.

CONCLUSIONS

Absence or non-apparent common physical exam manifestations does not exclude this diagnosis. It is fundamental to consider Myasthenia Gravis in the differential diagnosis of vocal cord palsy, as well as for recurrent respiratory distresses following stressors in a middle-aged woman. Early recognition of these atypical features is critical to avoiding life-threatening complications.

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