
Sticky Throat

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Abstract

A 46-year old woman from Hlaing Thar Yar Township presented to the medical ward of Insein General Hospital with acute onset of fever, dyspnoea and coma. She had one year history of tiredness and feeling of sticky sensation in the throat while swallowing meals. Tiredness was especially marked in the evenings and after heavy work. The feeling of sticky sensation was felt intermittently but it was more remarkably felt during dinner and after having a heavy meal. On admission, she was cyanosed, respiration was depressed and autonomic disturbances were observed. She was treated in the intensive care unit with assisted ventilation. Upon further investigation along with clinical assessment and nerve conduction studies the diagnosis was confirmed as generalized myasthenia. This is an example of myasthenia presenting with vague signs and symptoms that finally lead to a health crisis. The delay in diagnosis occurred due to lack of detailed analysis of the symptoms, lack of suspicion and the unique presentation of the case with vague symptoms. The lesson to be learnt from this case is that neuromuscular disorders should always be considered in cases presenting with throat problems.

1. Case Presentation

A 46-year old house wife from Hlaing Thar Yar Township was referred to the medical ward of Insein General Hospital from a private clinic complaining of fever for 3 days and breathlessness for 2 days.

Three days prior to the admission she developed fever with cough. Cough was productive but sputum was scanty and there was no hemoptysis or chest pain. The general practitioner first treated her as suffering from respiratory infection. The next day she developed breathlessness which was progressive. However, breathlessness was not associated with wheeze or orthopnea. On the day of admission she could not swallow anything, became distressed, breathless and looked blue. On arrival at the emergency department she became unconscious.

Her past history revealed that she had noticed by herself that she was feeling unwell for about one year and that she felt tired. Her feeling of sickness was not associated with weight change, mood change, insomnia, prolonged fever, polyuria, joint pain, loss of appetite, headache, jaundice or oedema. She felt tired especially after doing heavy work such as washing or cleaning, and it was more marked in the evenings. The tiredness disappeared in the mornings when she woke up. She felt entirely fresh in the morning after a sound sleep. The most strikingly feature she had was the

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occasional feeling of stickiness on swallowing. This feeling usually appears when having heavy meals. It never occurred when having breakfast. It was not associated with heart burns, dyspepsia, abdominal pain or vomiting. Prior to admission she felt difficulty in swallowing and choked many times. She also noticed that she had recently lost her voice when reciting hymns.

ENT assessment was said to be normal. There was no history of hypertension, diabetes mellitus, tuberculosis or thyroid disease. She consulted many doctors and tried all kinds of medications, including traditional medicine. In spite of seeking medical care from various disciplines, she felt indifferent to the treatment prescribed and no improvement was seen.

On examination, she was cyanosed and unconscious with GCS (Glasgow Coma Scale) 4/15. She was febrile with a temperature of 101°F. There was no pallor or jaundice. The respiratory rate was 12/min and pulse rate was 60/min. Blood pressure was 170/110 mmHg. Examination of the respiratory system revealed coarse crackles in the right basal region of the lungs. Cardiac examination was unremarkable. Thyroid gland was not enlarged. Pupils were 2 mm in size, equal in both sides and reactive to light, No head injury was detected. There was no focal neurological deficit. Pulse oximetry showed oxygen saturation of 63%.

The provisional diagnosis was acute respiratory failure probably due to pneumonia and it was suggested that additional causes of respiratory failure are to be explored.

2. Investigations

2.1 The base-line investigations carried out at time of admission are as follows;

- **Blood tests**

Hb - 11.4 g/dL

Urea - 3.2 mmol/L

WBC - 26.55 x 10⁹/L

Creatinine - 76.8 µmol/L

Granulocytes - 26.04 x 10⁹/L

Na⁺ - 137 mmol/L

Platelet - 359 x 10⁹/L

K⁺ - 3.8 mmol/L

HCO₃⁻ - 20.9 mmol/L

Cl⁻ - 104 mmol/L

BM stix - 519 mg/dL

- **ECG** - sinus rhythm, heart rate 60/min with no evidence of ischaemia or conduction defects or cardiomegaly
- **Chest X'ray** - patchy consolidation in right lower zone of the lungs

She was immediately treated in the intensive care unit with assisted ventilation. She was given parenteral co-amoxiclav, clarithromycin along with supportive care. Her blood glucose was controlled by intravenous insulin.

She recovered uneventfully and was put off the ventilator after 48 hours of intubation. However, at the time of recovery, it was noticed that her speech was slurred and she had difficulty in swal-

lowing food and water. She also complained that her eyelids were heavy. Blood glucose returned to normal 24 hours after treatment and the blood pressure came down to around 110/70 to 120/80 mmHg after 48 hours. Signs of respiratory failure also diminished. The detailed clinical assessment was again carried out.

On physical examination, it was found that ptosis occurred after sustained upward gaze. Loss of voice occurred after counting 1 to 50. Muscle power when carrying out shoulder abduction and adduction movements was reduced following repeated active movements (Figure: 1 and 2). The presumptive diagnosis was myasthenia gravis and further investigations were carried out.

2.2 Investigation done on the 4th day after admission are as follows:

- **Blood tests**

Hb - 11.6 g/dL	Urea - 3.4 mmol/L
WBC - $8.8 \times 10^9/L$	Creatinine - 72 $\mu\text{mol/L}$
Granulocytes - $6.15 \times 10^9/L$	Na^+ - 136 mmol/L
Platelet - $295 \times 10^9/L$	K^+ - 3.9 mmol/L
	HCO_3^- - 22.1 mmol/L
	Cl^- - 103 mmol/L

BM stix - 98 mg/dL

HbA_{1c} - 4.9%

T_3 - 0953 ng/mL (0.846 – 2.02)

T_4 - 9.02 $\mu\text{g/mL}$ (5.13 – 14.16)

TSH - 4.81 mIU/L (0.27 – 4.2)

- **ECG** - sinus rhythm, heart rate was 76/min
- **Chest X'ray** - reduced patchy consolidation in right lower zone



Fig 1. Myasthenic snarl while counting 1 to 50
(Produced with the patient's permission for medical education purposes)



Fig 2. Bilateral ptosis on sustained upward gaze
(Produced with the patient's permission for medical education purposes)

• **Nerve conduction study**

It revealed normal response to both motor and sensory nerve stimulation. However, on repetitive stimulation the test revealed significant decrease in responses in all 3 muscles tested. This finding was consistent with the diagnosis of myasthenia gravis (Fig 3).

• **CT scan chest**

The test did not reveal any thymic mass (Fig 4).

• **Spirometry**

Spirometry test done at the time of recovery showed normal respiratory function with normal flow-volume loop.

Test	Measured value	Predicted value	Predicted %
FVC	3.38 L	2.29 L	148
FEV1	2.29 L	1.94 L	118
FEV1/FVC	67.7	80.4	84
PEF	2.46	5.43	45

• **Anti-nuclear antibody** - negative. Anti-acetylcholine receptor antibody was not determined.

The final diagnosis was acute type II respiratory failure due to myasthenia gravis (myasthenic crisis) precipitated by aspiration pneumonia.

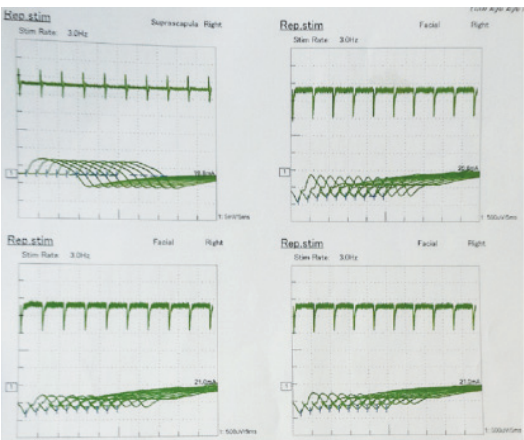


Figure 3. Nerve conduction study revealing decrease in response after repetitive stimulation

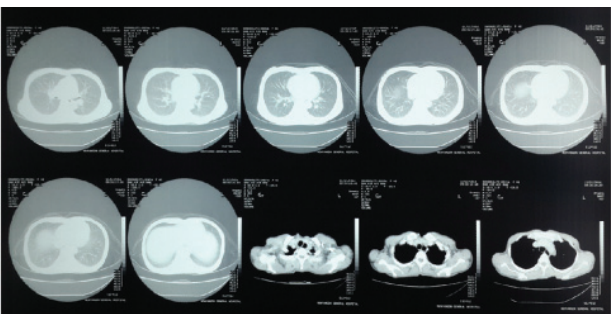


Figure 4. CT scan revealing no thymic tumor

3. Treatment

She was treated with pyridostigmine, low dose prednisolone and azathioprine. She was also provided with information regarding Do's and Don'ts for patients diagnosed with myasthenia gravis. On subsequent visits at 2 weeks, 4 weeks, 8 weeks and 12 weeks intervals after discharge she felt physically better. Her tiredness disappeared and there was no more feeling of sticky sensation in the throat.

4. Discussion

Myasthenia gravis is a condition causing abnormal weakness of certain muscles. It is an autoimmune disease marked by muscular weakness without atrophy. Basic pathophysiology defect is in the action of acetylcholine at neuromuscular junctions. It is a treatable neurologic disorder. Several factors (eg. severity, distribution, rapidity of disease progression) should be considered before therapy is initiated. Pharmacologic therapy, plasmaphoresis and thymectomy are the treatment options. Pharmacologic therapy includes anticholinesterase medication and immunosuppressive agents such as corticosteroids, azathioprine, cyclosporine, and intravenous immunoglobulin (IV Ig). Intubation and ICU care may help in the state of myasthenic crisis, a state of exacerbation.

This is a case of myasthenia gravis presenting with vague symptoms that finally culminated into a near fatal health crisis. However, she had a happy outcome. There are a variety of causes of tiredness (fatigue) one of which is myasthenia but her description of dysphagia as sticky throat lead to the delay in obtaining the correct diagnosis. Detailed and open minded questioning about her symptoms and a thorough analysis of her symptom could have helped the physician to get the correct diagnosis.

The myasthenic crisis that occurred in this case could be due to repeated aspiration pneumonia as a result of swallowing difficulties as a result of myasthenia. Food and medications used to treat her pneumonia (ibuprofen and ciprofloxacin that was used in general practice) could have been aspirated into her lungs.

5. Take home message

Vague symptoms like tiredness should never be ignored and it should not be treated as a case of vitamin deficiency or psychiatric disorder. The root cause of tiredness should be explored and detailed analysis of the signs and symptoms should be done. Suspicion of neuromuscular disorders should always be kept in the mind and it should be included in the differential diagnosis in cases presenting with refractory and obscure ear, nose and throat (ENT) symptoms such as stickiness in the throat.

6. Reference

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