E-Poster

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From Flu to Flaccid Paralysis: Axonal Guillain-Barré Syndrome in a Previously Healthy Young Male

Topic: Health Conditions (Nervous System, Musculoskeletal System, Cardiopulmonary System)

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BACKGROUND

Guillain-Barre syndrome (GBS) is known as an immune mediated, progressive, predominantly motor polyneuropathy. It often requires prolonged hospitalization and extensive rehabilitation. GBS most often presents as a demyelinating disorder; rare cases are associated with similar clinical presentation but electrodiagnostically demonstrate predominantly axonal loss.

CASE DESCRIPTION

Twenty six year old military service male developed acute progressive ascending bilateral lower extremities (LEs) and upper extremities (UEs) weakness seven days after being diagnosed with Influenza A pneumonia at his local military hospital. He denied bulbar symptoms, numbness in upper and lower extremities. Lumbar puncture and electromyography (EMG) were not performed during hospitalization. Initial electrodiagnostic test (EDX) was performed during inpatient rehabilitation, at least one month after the onset of symptoms. Follow-up EMG was performed two months later. At the time of initial EDX, physical exam revealed following muscle strength: trace of bilateral ankles strength with at least antigravity strength in the rest of LEs muscles; at least antigravity strength in upper extremities (UEs) with distal > proximal weakness. Sensation was intact in bilateral UEs and LEs, absent Achilles and symmetrically decreased other reflexes in LEs and UEs.

Initial EDX of right UE and right LE revealed:

- Absent common peroneal motor response, profoundly decreased amplitudes of tibial, median, ulnar motor responses along with mildly decreased motor conduction velocity
- Normal sensory responses in right LE and UE
- Marked abnormal spontaneous activity in distal and proximal lower and upper extremities muscles with no signs of reinnervation and profoundly decreased recruitment.

Follow-up EMG revealed:

- Partial improvement of amplitude of median and ulnar motor responses with mildly decreased conduction velocity
- Normal sensory responses
- Absent median and mildly prolonged ulnar F-response
- Abnormal spontaneous activity, signs of reinnervation and improvement in recruitment.

These findings correlated with mild improvement in physical strength in upper and lower extremities.

DISCUSSION

Guillain-Barre syndrome typically presents as a demyelinating neuropathy, with possible axonal changes later in the course. This patient's presentation reveals early axonal loss, which is a rare presentation. Axonal GBS is typically associated with worse outcomes, slower and longer recovery. This case represents Acute Motor Axonal Neuropathy (AMAN), a form of GBS.

CONCLUSION

It is important to recognize the axonal variant of GBS early in the disease course, correlate EDX findings on serial testing with patients' clinical improvement in muscle strength in order to prognosticate the recovery and provide patients with optimal rehabilitation.

Statement of Disclosures
None

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