Case presentaion

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Patient profile

- A 68 year old man,artist
- Hx of HTN
- No recent vaccinations or infections reported

- Presented to the emergency department after experiencing a 5 day history of progressive weakness
- Day 1:developed paresthesia in the toes and feet
- Day 2:weakness began in both legs leading to difficulty in walking
- Day 3:weakness ascended to hips, makes stair climbing challenging
- Day4:mild shortness of breath while lying flat(orthopnea) and increased fatigue
- Day5: attended to the hospital after experiencing increased weakness in the arms, making it difficult to perform daily tasks

- Physical examination:

- Motor Examination:
- Lower limbs:3/5 in proximal and Distal muscles
- Upper Limbs: 4/5 in proximal and distal muscles
- Diminished DTRs in all four extremities
- Decreased pinprick and temperature sensations in lower limbs with a stocking and gloves distribution
- Bilateral facial weakness, No other Cranial nerve deficits observed

- Diagnostic workup:
- Mildly elevated liver enzymes,

Hyponatremia, microscopic hematuria

- Lumbar puncture: Elevated protein levels with a normal WBC count(albuminocytologic dissociation)(Timing of CSF analysis is crucial)

- Additional testing: blood tests to rule out infections and other autoimmune conditions

- EMG-NCS:
- Electrodiagnostic parameters are the most reliable indicators of prognosis
- EMG-NCS may yield normal results early in the early phase, leading to missed diagnoses(Except Neurogenic pattern in muscles and absent late responses)
- Slowed conduction velocity, prolonged F wave latency
- Distinguishing demyelination and axonal degeneration
- Needle EMG findings: Signs of denervation and reinervation

- Imaging studies:
- Indications for MRI in atypical presentations or to rule out compressive lesions

- Potential findings of nerve root enhancement indicating inflammation

- Differential diagnosis:
- AIDP

- Chronic inflammatory demyelinating polyradiculoneuropathy(CIDP):longer duration and fluctuating symptoms may confuse the diagnosis

- Myasthenia Gravis: presents with fluctuating weakness, serological testing, EMG-NCS and physical examination can help differentiate

- Acute transverse myelitis: Distinct sensory and motor deficits may lead to misdiagnosis if history taking and ph/ex is incomplete

- Based on clinical presentation ,EMG-NCS and CSF analysis a diagnosis of Guillain Barre syndrome was confirmed

- Predictors of recovery:

Age at onset, initial strength, time to nadir, and presence of respiratory failure correlate with recovery potential

- GBS has variants,AIDP, AMAN, AMSAN , Miller fisher(ataxia, ophthalmoplegia and areflexia) and …. (acute pandysautonomia, sensory GBS)

- Our patient was admitted for close monitoring due to respiratory involvement
- Initiated intravenous immunoglobulin(IVIG) therapy at a dosage of 0.4g/kg/day for 5 days to modulate the immune response and reduce the severity of the disease
- Another option is plasma exchange(40-50mL/kg on alternate days)
- These two treatments are equally effective but the combination of the two is not significantly better than either alone

- Supportive care:
- Rehabilitation: early physical therapy was initiated to improve mobility and prevent complications such as contractures and DVT
- Pain management: Gabapentin was prescribed for neuropathic pain management which is common in GBS patients
- Monitoring: continious monitoring for respiratory function and autonomic dysfunction(fluctuation in BP,HR,urinary retenion, diarrhea),our patient didn’t require intubation but was closely observed for any deterioration

- prognosis:
- Age(>60y)
- Ventilatory support
- Rapid progression reaching max deficit in less than 7 days, low amp of distal CMAPs
- (poor prognostic factors, associated with a less than 20% probability of walking independently at 6 months)

- Outcome:
- Follow up: significant improvement was noted within 2 weeks of treatment
- Muscle strength improved to 5/5 in upper limbs and 4/5 in lower limbs by the time of discharge

- Long term prognosis:
- Full recovery anticipated within 3-6 months with ongoing outpatient rehabilitation and monitoring
- Our patient was scheduled for follow up appointments at 1 month,3 months and 6 months post discharge to assess recovery progress

- Importance of early diagnosis and treatment:
- Prompt recognition and treatment led to a significantly better prognosis and reduced the risk of long term complications
- Interdisciplinary collaboration: effective management of GBS requires collaboration among neurologists, physical therapists, and nursing staff to provide comprehensive care