Myasthenia Gravis

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Overview

- CASE
- Myasthenia Gravis
- Effects on the Elderly
CASE

- 83 y.o Female, lives alone in Bungalow.
- Admitted for scheduled Laparoscopic anterior resection of Rectosigmoid Cancer.
- Consult: ?mood
- PmHx: HTN, Dyslipidemia, COPD, DM, Paroxysmal Afib, CAD, Anemia, Lumbar DDD.
- Functional Hx: Ind. With ADL’s, Limited mobility, use cane outside. Ind. With most IADL’s.
Physical Exam

Eye findings:
- Restricted and abnormal EOM’s
- Ptosis
- Complaints of diplopia
DDX

- ? Ocular Myasthenia Gravis
- Or
- Early Stage Progressive Supranuclear Palsy
Myasthenia Gravis

- Autoimmune disorder is characterized by weakness and fatigability of skeletal muscles.
- When the symptoms of MG are isolated to the levator palpebrae superioris, orbicularis oculi, and the oculomotor muscles, it is referred to as ocular MG (OMG).
Pathophysiology

- Antibody-mediated autoimmune attack against AChRs and neuromuscular junction.
- Reduce number of AChRs – reduce length of postsynaptic membrane.
- Shortening of the synaptic folds due to destruction of terminal expansion.
- Widening of synaptic cleft.
Classification

1. Ocular myasthenia gravis
2. Generalized Myasthenia Gravis (MG)
3. Severe MG
Clinical Features

- Ocular myasthenia (15%) cases have clinical signs confined to extrinsic ocular muscles.
  - Ptosis
  - Oculomotor Paresis
  - Diplopia
- Generalized myasthenia – weakness is generalized in most cases
DDX

- Thyroid Ophthalmopathy
- Chronic progressive external ophthalmoplegia
- Muscular dystrophy
- Brainstem and motor cranial nerve pathology
Diagnosis

- Ice Pack Test
- Tensillon Test
- Anti-AChR antibody test
- Repetitive Nerve Stimulation
- Single Fiber EMG
- CT/MRI
Prognosis

- 2/3 develop signs and symptom of GMG
- 1/3 pure OMG
Treatment

- Symptomatic mgmt of ptosis and diplopia.
- Anticholinesterase agents: Pyrodistigmine.
- Immunosuppressive agents: Prednisone or Steroid Sparing agents.
- Thymectomy
- Surgery ptosis and diplopia.
Neuro Seen: Evidence of almost complete ophthalmoplegia, some downgaze bilaterally.

Absent saccades with L ptosis and upside down ptosis.

Unsure fatigability.

Supports: Ocular myasthenia gravis
EMG

• Nerve Conductions:
  • RNS done with trapezius muscle on Rt. side- no response. Unable to do nasalis muscle- not cooperative.
  • Motor nerve conduction study for Rt. median/ulnar showed normal latency, amplitude and conduction velocity.
  • Sensory nerve conduction showed mild prolonged latency with normal amplitude.
Impression/Plan

- Recommend single Fiber EMG or trial on Mestinon.
- DDx: Ocular myasthenia gravis, ocularpharyngeal dystrophy (quite probable), mitochondrial myopathy, or PSP syndrome.
- Genetic Study for oculopharyngeal dystrophy
- Then consider muscle biopsy


UptoDate (2010). Ocular Myasthenia Gravis.