Beware: Ptosis with Exophthalmos

Analysis of Ocular Myasthenia Gravis and Thyroid Eye Disease

A rearview perspective

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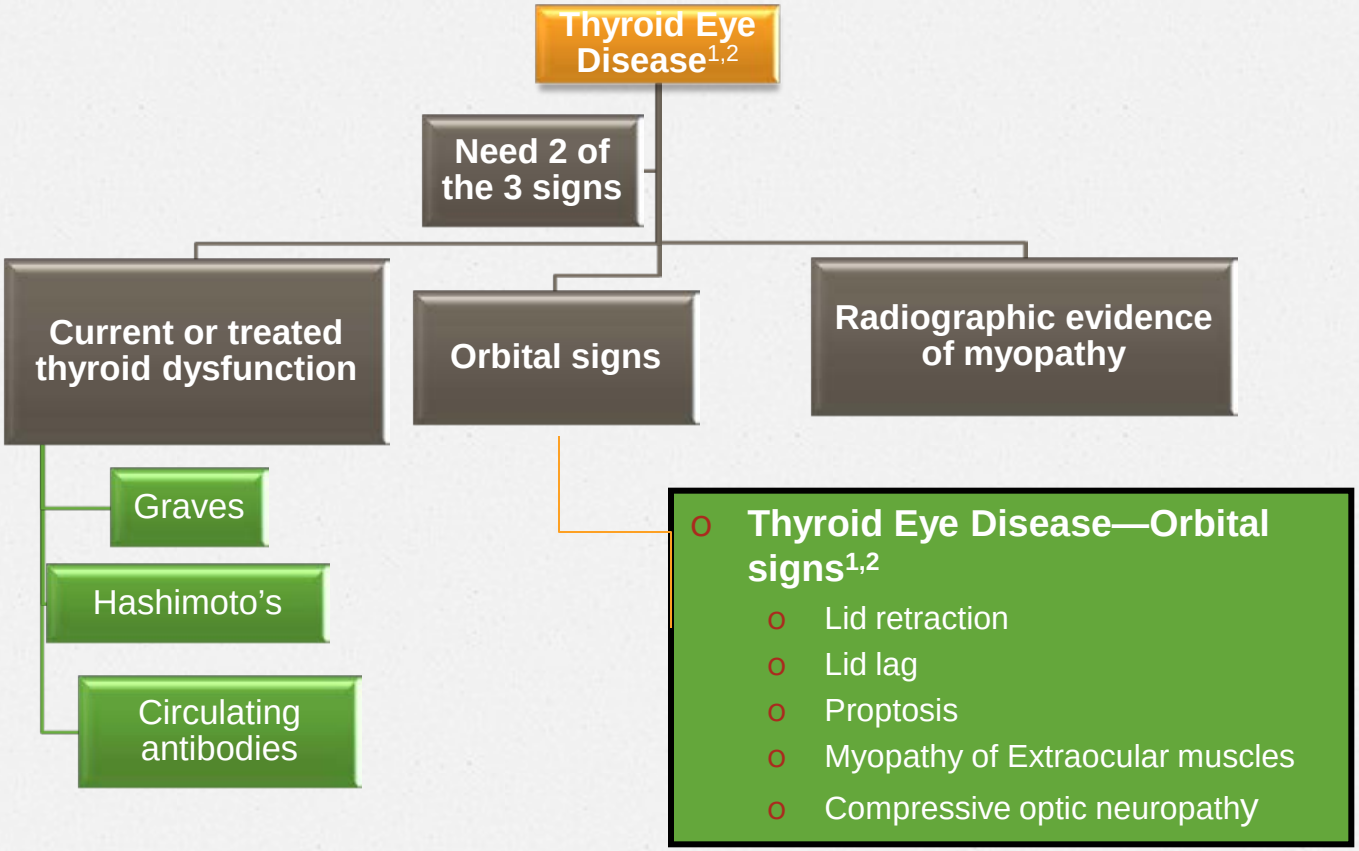
Financial Disclosures

- None

Purpose

- To examine:
  - The co-existence of Thyroid eye disease with Ocular myasthenia
  - Time to co-diagnosis
  - Potentially life threatening complications

Background



1. Skuta G, et al. Basic and Clinical Science Course: Orbit, Eyelids and Lacrimal System, 2012.
2. Skuta, G, et al. Basic and Clinical Science Course: Update on General Medicine, 2012.

Background

- Myasthenia Gravis– fluctuation and fatiguability (ocular)[3]
  - Ptosis (fatiguing)
  - Cogan's Lid twitch
  - Enhancement of ptosis
  - Diplopia (variable degrees on serial exams)
  - Obicularis oculi weakness
- Incidence roughly 1:10,000 to 1:50,000

3. Skuta, G, et al. Basic and Clinical Science Course: Neuro-Ophthalmology, 2012
4. Sathasivam, S. Current and emerging Treatments for the management of myasthenia gravis. *Therapeutics and Clinical Risk management.* 2011:7, 313-323
5. Mappouras, D. et al. *Antibodies to acetylcholinesterase cross-reacting with thyroglobulin in myasthenia gravis and Graves disease.* Clinical Exp Immunology 1995; 100: 336-343

Background

- Myasthenia Gravis[3,4,5]**:Important to recognize**
  - 85% of pts with ocular MG→systemic disease in 2 years
  - 20% will need intubation and/or ventilator support due to myasthenic crises in <1 year
- Autoimmune related, Ab's:
  - Acetylcholine receptor (modulating, binding, blocking)
  - Muscle Specific Kinase

3. Skuta, G, et al. Basic and Clinical Science Course: Neuro-Ophthalmology, 2012
4. Sathasivam, S. Current and emerging Treatments for the management of myasthenia gravis. *Therapeutics and Clinical Risk management.* 2011:7, 313-323
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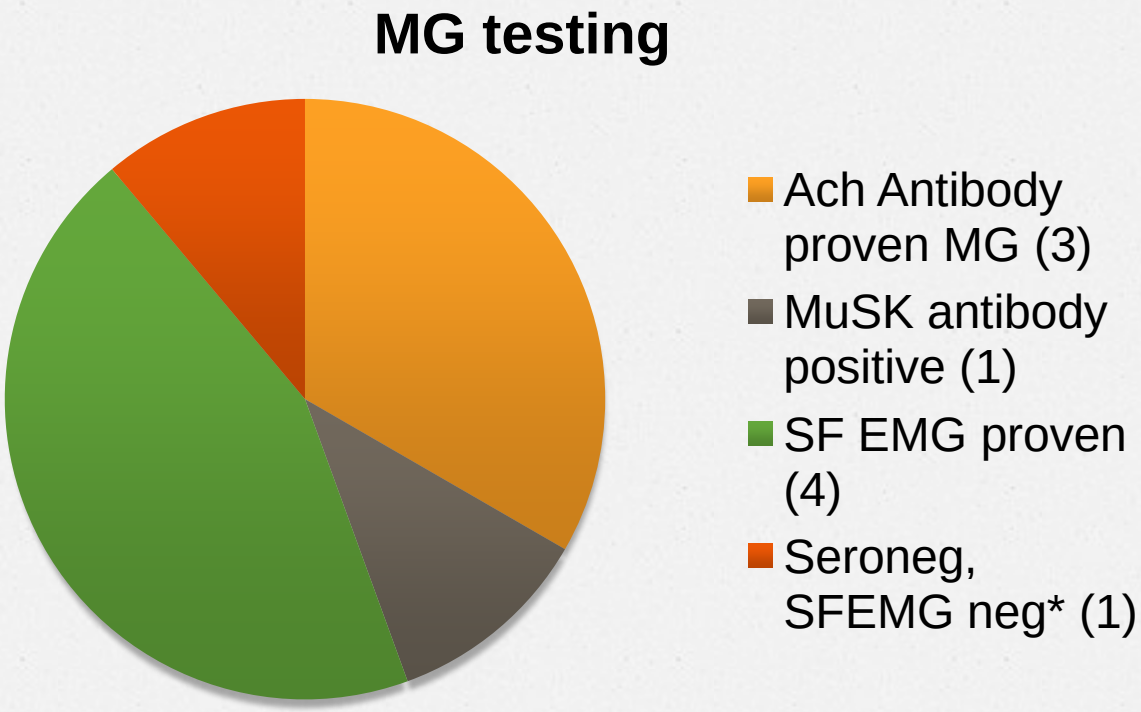
Methods

- Retrospective review of patient data, spanning from 2005-2013
- 9 patients selected
  - TED + Myasthenia Gravis

Results

- Demographics
  - African American: 56%
  - Caucasian: 44%
  - Average Age at presentation: 54.7 years (±19.8)
  - Sex: Male 4:9, Female 5:9
- Median length of follow:32 months
- **Time to co-diagnosis**:
  - Mean: **5.3 months ±5.7 (0-14 months range)**
  - Excluding those diagnosed at presentation: **6.1 months ±5.1**

Results



* Patient still met clinical criteria for myasthenia gravis

Results

- Complications:
  - 2 patients were known to have severe respiratory issues
    - 1 of which had multiple hospitalizations for respiratory crises
      - Same patient required ventilator assistance prior to diagnosis of myasthenia

Results

Thyroid status	Percentage
Hypothyroid	11.1% (1/9)
Euthryoid	22.2% (2/9)
Hyperthyroid	66.7% (6/9)

Thyroid status	Abnormal TPO antibody levels (percentages)
Euthryoid (2/9)	100%
Hyperthyroid (6/9)	66.7% (4/6)

Results

	N=9
Tested for Thyroglobulin Abs	5 (55.5%)
Met Criteria for Hashimoto's Thyroiditis	6 (66.7%)

Conclusions/Pearls

- MG and TED are not mutually exclusive, but can exist simultaneously
- Antibody testing alone is insufficient if negative
- Follow of up to 1 year may be needed to make co-diagnosis
- If MG is missed, could have dire consequences
- Hashimoto's thyroiditis should be considered in patients with apparent TED and MG

Thank you

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Questions?