

## Final Eyes 2020

Title: Graves' Ophthalmopathy  
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Length: 1 hour

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### **OBJECTIVES**

By the end of this course the attendee should be able to ...

1. ... describe "Rundle's Curve" and the natural history of Graves' Ophthalmopathy;
2. ... understand that the orbital disease is unrelated to the thyroid status;
3. ... list the clinical findings of Graves' Ophthalmopathy;
4. ... understand and use the Clinical Activity Score (CAS)
5. ... list the surgical treatment options for patients with Graves' Ophthalmopathy;
6. ... identify that Teprotumumab is a new treatment option specifically targeting the orbital inflammation from Graves' disease

### **OUTLINE**

1. Introduction
2. Natural History
  - 2.1. Rundle's Curve
3. Autoimmune Disease
  - 3.1. Systemic involvement
    - 3.1.1. Thyroid
    - 3.1.2. Pre-tibial Myxedema
    - 3.1.3. Nail changes: Achropachy, Plummer's nails
    - 3.1.4. Orbit

3.2. Orbital Disease unrelated to thyroid status

4. “Triggers” and aggravating factors

4.1. Stress

4.2. I-131

4.3. Tobacco

5. Clinical findings

5.1. Eyelid findings

5.1.1. Retraction,

5.1.2. Lid lag,

5.1.3. Lagophthalmos,

5.1.4. Edema

5.2. Exophthalmos

5.3. Chemosis

5.4. Restrictive strabismus

5.5. Optic nerve dysfunction

6. Clinical Activity Score “CAS”

6.1. Baseline and Subsequent exams

6.2. Baseline components

6.2.1. 1) Spontaneous orbital pain

6.2.2. 2) Gaze-evoked pain

6.2.3. 3) Eyelid swelling caused by Graves’

6.2.4. 4) Eyelid erythema

6.2.5. 5) Conjunctival redness caused by Graves’

6.2.6. 6) Chemosis

6.2.7. 7) Inflammation of caruncle, plica

6.3. Subsequent

6.3.1. 8) Increase of  $\geq 2$  mm of proptosis

6.3.2. 9) Decrease eye movements  $\geq 5^\circ$  in any direction

6.3.3. 10) Decrease of acuity  $\geq 1$  Snellen line

6.4. Scoring

6.4.1. Baseline:

6.4.1.1. Add items 1 – 7

6.4.1.2. Score  $\geq 3$  indicates active Graves'

6.4.2. Subsequent:

6.4.2.1. Add items 1 – 10

6.4.2.2. Score  $\geq 4$  indicates active Graves'

7. Treatment options:

7.1. Non-surgical,

7.1.1. Observation

7.1.2. Lubrication

7.1.3. Immunosuppression

7.1.4. Radiation

7.2. Teprotumumab

7.3. Surgical

7.3.1. Orbital decompression

7.3.2. Strabismus

7.3.3. Eyelid

7.4. Customize to patients

8. Cases

9. Questions / Discussion