CLINICAL CASES

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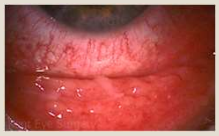
Case #1: The Stubborn Red Eye

- History: 15yo wf presents w red eye OD onset 2 weeks
  - Reports started after getting eyelash glue in eye
  - Mild mucous discharge, swollen
  - Diag w conjunctivitis at Urgent Care/tobradex qid od
  - Initial improvement, recurred after d/c gtts
- Clinical presentation:
  - Conj injection 2+ OD, neg keratitis
  - Mild inf pannus, inf limbus
  - Grade I-2+ mucopurulent discharge
  - Follicular? rxn Gr 3 OD, LL>UL, neg OS
  - PAN inconclusive?



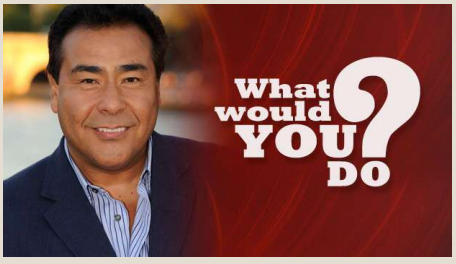
Thoughts? Additional Questions?

Viral?
- Non-responsive to antibiotic
- Slight improvement w steroid comp
- Lingering after d/c gtts
- PAN?
- Hx cold/flu? Other illness?
- Unilateral?
- Follicular rxn?

Other?

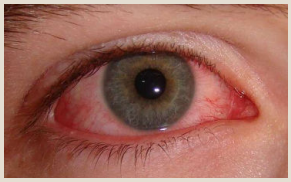
Toxic?
- Tobramycin?
- Course of initial improve to reocurrence
- Unilateral
- Eyelash glue?

Allergic?
- Slight improvement w steroid
- Unilateral?
- Itching?



Treatment

- Start FML qid OD
- Artificial tears qid OD
- Return to clinic 5-7 days



1 Week Follow-Up

- Initial improvement 1st few days
- Now seems WORSE!!?
- NOW WHAT?

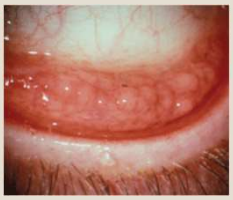
Chronic Follicular Conjunctivitis

Differential Diagnosis

<u>Toxic Follicular Conjunctivitis</u>
- Identifying offending agent (eyelash glue)
- Improvement after removal

<u>Molluscum Contagiosum</u>
- Viral infection
- Lesions often near eyelid

<u>Chlamydial Conjunctivitis</u>
- Trachoma
- Inclusion Conjunctivitis



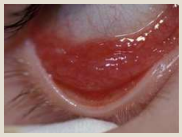
Trachoma

Herbert's Pits

Conjunctival Scarring

Adult Inclusion Conjunctivitis

- Most common cause of ocular chlamydial inf
- Sexually transmitted systemic disease
- Presents as red, mucopurulent conjunctivitis
- Limbal pannus, peripheral SEI's
- Large follicular rxn inf>sup
- Small non-tender PAN
- Often unilateral initially
- Conjunctival scrapings poor yield



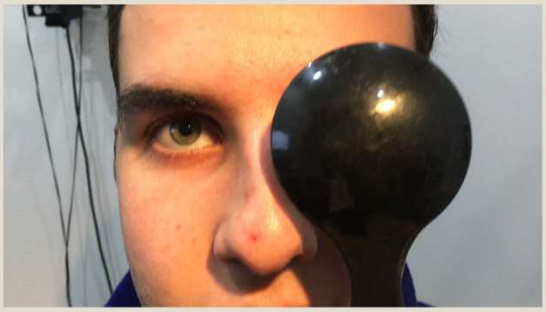
Treatment
- Doxycycline 100mg bid x 7 days, Azithromycin 1g dose, Erythro 500mg qid x 7 days

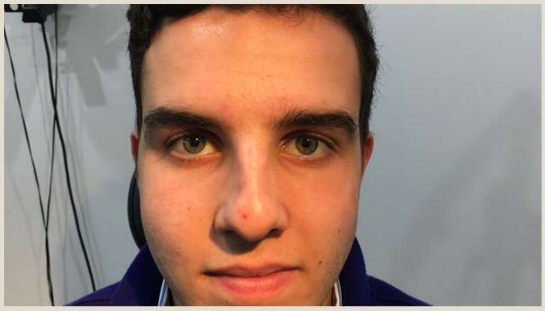
Further Considerations

Case #2: "I See Ghosts"

- 2 cases 14yo wf and 19yo wm
- 1st Reports "ghosting" "sees 2 images sometimes", friends/mother notice "Left eye floats when tired"
- 2nd Reports "seeing vertical double" when looking left, "right eye goes up"
- Symptoms onset? Few days? …Few mos? Notice worse recently.
- Both cases: neg HA's, trauma, nausea, dizziness, weight loss, muscle weakness

- Clinical Data:
- BCVA 20/20 OU, low hyperope
- PERRLA-APD, IOP WNLs, SLE/Fundus WNLs
- Hyper primary gaze, min exophoria



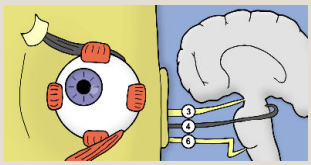


Differential Diagnosis?

- Orbital restriction?
  - Thyroid, previous trauma
- Partial IIIrd nerve palsy?
- Myasthenia gravis?
- Brown's syndrome?
- Skew deviations?
- IVth nerve palsy?

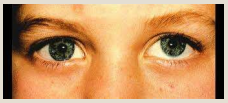
Cranial Nerve IV

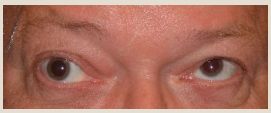
- Only CN comes off back of brainstem
- Longest CN
- Innervates SO
- MOA's: intorts, depresses and abducts
- Primary gaze: Hypertropia
- Head tilt opposite paretic muscle
- Pattern: Nasal upshoot

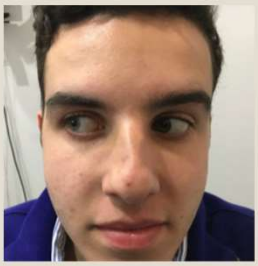


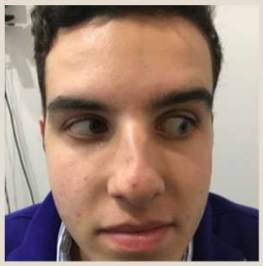
Cranial Nerve IV Palsy

Pattern









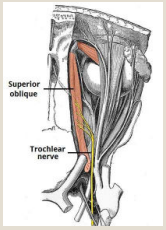
Cranial Nerve IV Palsy

Causes

- Vasculopathic
  - Diabetes, HBP, GCA
- Tumor (rare)
- Trauma
- Congenital

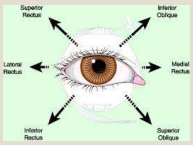
Congenital IVth Nerve Palsy

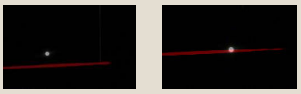
- Present at birth
- Due to weakness or paralysis of SO
- Dysgenesis or dysfunction of nucleus, nerve, or tendon
- Usually unilateral
- Develop compensating head tilt, fusional amps
- Torticollis



Congenital CN IV Palsy
Diagnosis

- Typically child, young adult
- R/O vascular, traumatic etiology, other CN
- Look for head tilt (opposite paretic muscle)
- Cover test hypertropia
- Subjective Maddox Rod
- Nasal upshoot pattern
- Parks 3 step method
- Vertical amps, old photos, torticollis

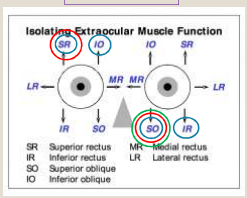


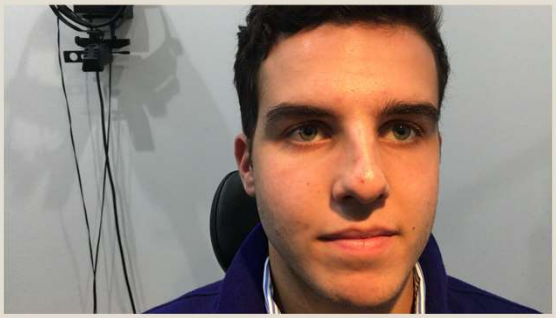


Cranial Nerve IV Palsy
Parks 3 Step Method

- Establish which eye is UP
- ID set of 4 muscles
- HT/MR separation will increase opposite gaze of paretic muscle
- HT/MR separation will increase same side head tilt

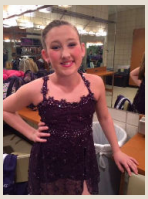
Left Hyper

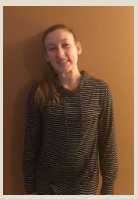




OLD PHOTOS

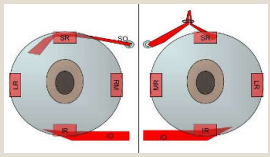

Florida
DRIVER LICENSE CARD
S867-530-98-675-3
MASKED HERO
911 HEADTILT LANE
DAYTONA BEACH, FL 32174
DOB: 04-01-1990 SEX: M HGT: 5 10
ISSUED: 05-16-2012
EXPR: 05-16-2016
REST: N
ENDORSE: N





Congenital CN IV Palsy
Management

- Referral to strabismic surgeon
- Imaging?
- Prism?
  - May reduce vertical fusional demands (mild)
  - Have no impact on tortional misalignment



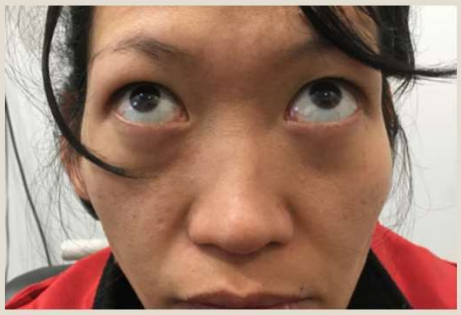
Case #3: "Eyes Under Pressure"

- 40yo AF reports for past few weeks feelings of "pressure" behind eyes OD>OS
- Feels like eyes "more open", denies diplopia

Further questioning:
- +weight loss past year (5lbs, current wt. 96lbs)
- Sleep difficulty, irritability

Clinical data:

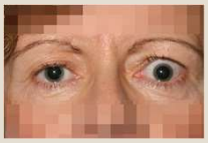
- BCVA 20/20 ou, DCT 16/17, PERRLA -APD
- Primary gaze: lid retraction 14/13mm, + Scleral show sup ou
- EOMs: Possible restriction upgaze od, neg diplopia
- Proptosis OD downgaze? Exopth 15/13mm
- SLE: trace exposure-k, incomplete closure OD



Differential Diagnosis?

Lid retraction/exophthalmus

- Grave's disease (most common)
- Inflammatory orbital disorders
- Vascular orbital disorders
- Orbital tumors
- Trauma (orbital fracture, hemorrhage)



Case #3

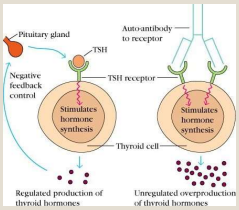
Assessment:
- Suspect Grave's/Thyroid eye disease
- Pt reports previously suspected for hyperthyroid, never returned for testing

Plan:
- Contact PCP for Thyroid testing
- Lubrication for exposure risk
- Request old photos for comparison

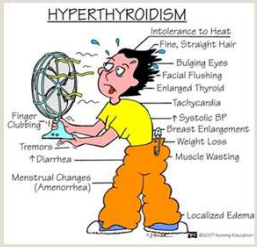
2005 2010 2015 2017

Grave's Disease
Summary

- Autoimmune disease affecting thyroid gland
- Prevalence <1% pop, 3-4% subclinical undiagnosed
- Can affect the eyes, skeletal muscles, and skin
- TSH, T4, T3
- Thyroid stimulating immunoglobins (TSI)
- Role of iodine
- Genetic and environmental triggers
- 7x more common women, 20-40yo
- Symptoms

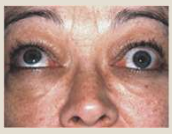


Symptoms



Thyroid Eye Disease(TED)
Grave's Ophthalmopathy

- Seen approx. 10-30% Graves Dx
- Patients w TED: 80% Grave's, 10% Hashimoto's, 10% Euthyroid
- Self-limiting disease
- Clinical signs often bilateral, but asymmetric
- Work-up: history, clinical eval(pupils), VF's, imaging
- Thyroid panel, biopsy(atypical)
- Phases of TED



Symptoms of TED

- Proptosis/bulging
- Eyelid lag/retraction
- Dryness/redness
- Blurred vision
- Grittiness/FB sens
- Diplopia
- Staring appearance
- Tearing

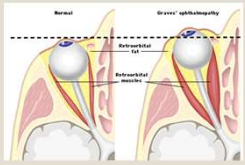
NOSPECS

- Class 1 No signs or symptoms
- Class 2 Only signs (lid retraction/stare)
- Class 3 Soft tissue involvement (signs/symptoms)
- Class 4 Proptosis
- Class 5 EOM involvement (diplopia)
- Class 6 Corneal involvement
- Class 7 Sight loss (optic nerve involvement)

Thyroid Eye Disease (TED)
Treatment

- Corticosteroids
- Immunosuppressants
- External beam irradiation
- Orbital decompression
  - Blurriness/loss of color vision, APD

- Natural supplements/vitamins
- Stress reduction techniques
- Avoid environmental toxins
  - Cigarette smoke, aspartame, dietary iodine



Case #3
Management

- Thyroid levels including TRAb WNLs
- Referral to endocrinologist for monitoring of thyroid testing
- Referral to Ophthalmologist (oculoplastics) for TED monitoring/treatment
- Education on nutrition/supplementation
- Avoidance of environmental toxins
- Treatment for exposure, dry eye symptoms

Case #4 "The Importance of History"

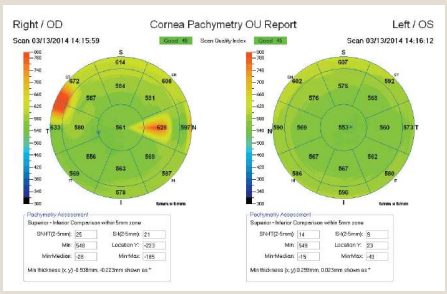
- 42yo wm
- Oc/syst history unremarkable
- Neg meds

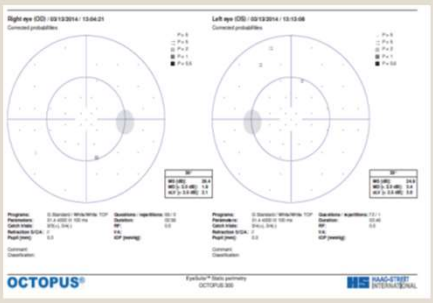
- Note: Referral by Lenscrafters Dr. for elevated IOP on REE.
- Goldmann IOP OD 34 OS 39 mmHg
- Angles "open", VF's/ONH's "appear normal"

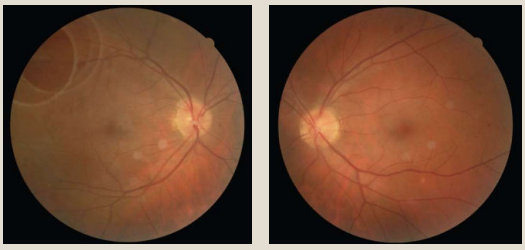
Initial Visit

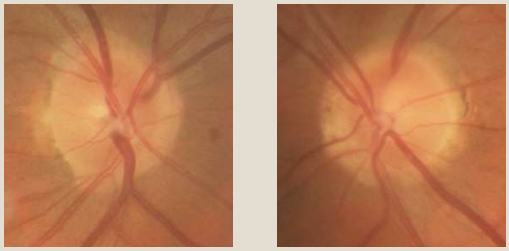
- BCVA: OD -350 20/20 OS -425 20/20
- SLE: WNL ?
- IOP (DCT): OD 42 OS 52 @2pm
- C/D: OD 0.35/0.35 OS 0.45/0.50
- VF: WNL ?

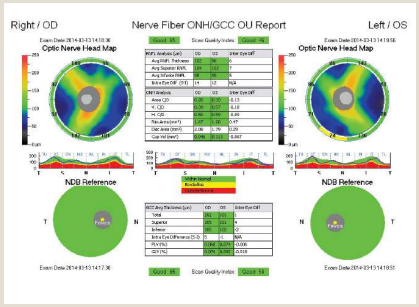
Thoughts? Questions?

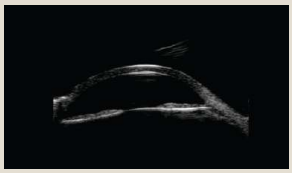

Right / OD
Cornea Pachymetry OU Report
Left / OS
Scan 03/13/2014 14:15:59
Scan 03/13/2014 14:16:12


OCTOPUS





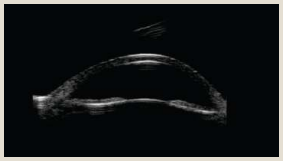


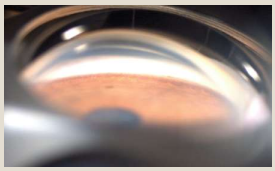


OD

UBM

OS





OD

GONIO

OS

Pertinent History

"I've been working on the jackhammer the last 2 weeks!"

Diagnosis: Pigmentary Glaucoma

- Plan: Start Combigan bid ou, Target: low-mid 20's
- F/u IOP's over 3 visits
  OD 25-29 OS 29-34 compl?
- Add Lumigan qhs OS
  OD 24 OS 25

Thank You