RANZCO 2009 STRABISMUS CASES

Q1: Diplopia following "routine" cataract surgery

Q2: Recent onset thyroid eye disease with restriction of upgaze, some diplopia, inflamed eyes. Should I be starting this patient on steroids?

LIONEL KOWAL MELBOURNE

Q1: Diplopia following "routine" cataract surgery

- CASE 1:
- Vertical diplopia on day 1 after block for L cataract
- Has L hyper – restricted depression L
- Due to LIR paresis : toxic effect of Marcaine
- Most improve : OK within a week
- Incidence: < 1%

Case 1 : Weeks 2, 3, …

- Now develops progressive L hypo over the next month
- LIR fibrosis
- Incidence ?0.1%
- Most don’t improve – need prisms or surgery
- Toxic effect of Marcaine

W1: IR paresis.

W2: great

W3: IR progressive fibrosis

Where is the needle?

- If the anaesthetist does a peribulbar or retrobulbar with an EMG needle and then attaches EMG recorder **~50% of the time the needle is in the inferior rectus**

Diplopia following "routine" cataract surgery

- CASE 2: 70 yo F
- High myope
- H diplopia after 1st cataract surgery
- It's because of the imbalance - will be better after 2nd eye is done

2nd eye cataract surgery 1w later

- Diplopia same…2nd image now clearer.
- Symptoms dismissed [again] – it'll get better
- 2nd ophthalmologist: ..you're 6/6 OU…looks great … I'm a cataract surgeon….

If you can't understand a pt's symptoms, it doesn't mean they are not there…or not important

Diplopia following "routine" cataract surgery : Motor and sensory causes

- Motor cause – in days of blocks, were common in a strabismus practice; now very rare
- All types / variations of motor causes usually easily recognised EXCEPT torsional diplopia : you have to **ask the pt: is the 2nd image tilted?**
- If doesn't behave like the typical IR palsy-then- fibrosis : Image
- Occult Graves' an irregular surprise

Diplopia following "routine" cataract surgery :

Sensory causes now more common than motor

- Case 2: Hemianopia
- Aniseikonia / metamorphopsia

….now more common than motor causes

Case 2: Hemianopia:

- If it's bad enough to cause loss of fusion = retinal slip, field loss won't be subtle and will be detectable on confrontation to movement of or counting fingers

…large pituitary tumour removed a few weeks later

Sensory causes nearly ALL diagnosable on history

ASK EVERY PATIENT WITH POST CATARACT DIPLOPIA THAT IS NOT QUICKLY / EASILY UNDERSTOOD:

Is the image seen by the R

- **Larger / smaller than the one seen by the L**
- **Same shape as L**
- **Paler / darker than L**
- Tilted [not aniseikonia: torsion]
- Final Q:**Does it wobble?** Heiman Bielschowsky, Sup Obl Myokymia, HororFusionis, Oculo palatal myoclonus,…

ALL OF THESE ARE BARRIERS TO FUSION

High risk #1: Beware correcting the anisometrope

- **Spectacles usually compensate for the aniseikonia of anisometropia BETTER than do IOLs or corneal refractive surgery**
- Converting R: -12, L: -4 to -4 DS OU runs a real risk of PRODUCING aniseikonia and permanent troublesome diplopia
- NO prospective studies to guide us how to handle anisometropic pts having IOLs or refractive surgery

High risk #2 : Beware macular membranes

- Metamorphopsia / aniseikonia can be beyond the ability of optical devices to resolve
- Cataract surgery can cause permanent diplopia in these pts

Q2

- **Recent onset thyroid eye disease with restriction of upgaze, some diplopia, inflamed eyes. Should I be starting this patient on steroids?**

SEMINAL Even if imperfect

Consensus Statement of the European Group on Graves' Orbitopathy (EUGOGO) on the management of Graves' Orbitopathy

Bartalena et al 2008

Thyroid 18:333-345 AND
Eur J Endocrinology 158:273-285

What we don't have…

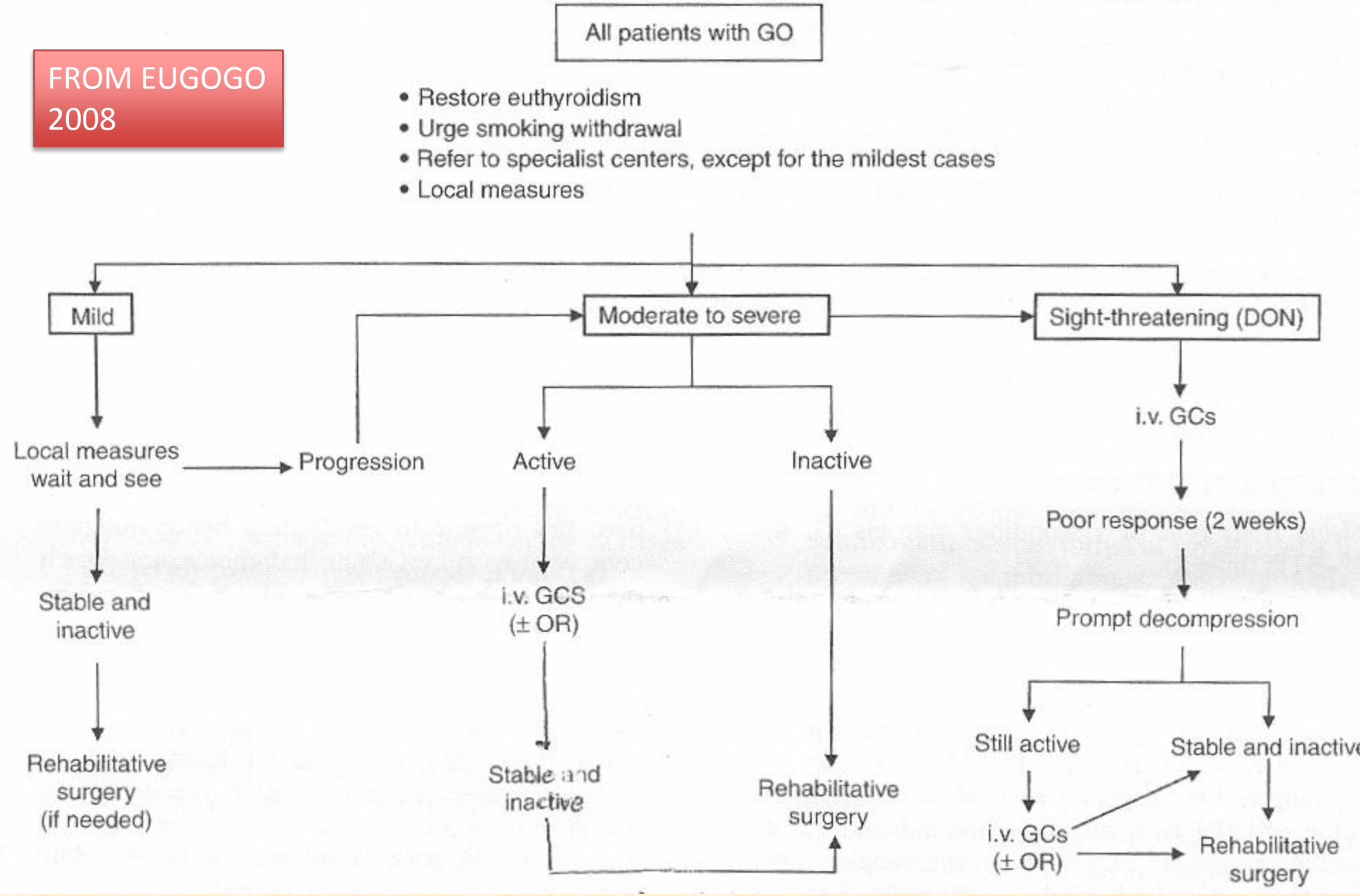
- Prospective randomised trial of steroids vs placebo or natural history with 1-2y follow-up
- Resolution of selection bias in different series e.g. Italian GO more likely to be male smokers than my GO pts

EUGOGO: Moderate to Severe GO

Usually have

- Lid retraction ≥2mm
- Mod to sev soft tissue involvement
- Exophthalmos ≥3mm
- Inconstant or constant diplopia

FROM EUGOGO 2008



Has pt recently had radioablation RA ?

- RA can lead to **development of new eye disease or progression of GOin 15 %in 6 months ***
- **This risk is *eliminated* by:**

1. **giving a 3 mo course of steroids [0.5 mg/kg 1-3d after RA and taper]**
2. Avoid post-treatment hypothyroidism

- **Will this dose/ duration of steroids have an wonderful effect on ALL pts with GO, independent of RA?**

***some 'progression' was trivial e.g. increased caruncular oedema**

Smoking effects….

- Development of GO
- Deterioration of pre-existing GO
- Effectiveness of treatments reduced
- Progression of GO after RAI
- LK : many anecdotal cases where smoking cessation / resumption results in change in clinical course within a few weeks

EUGOGO: Mod to severe GO: Oral steroids

- 1 mg/kg or 80 -100 mg/d starting dose
- 33-63% respond i.e. MANY don't respond
- **NO BENEFIT in trying 20-25-40mgm/d…or any other 'medium' dose** Exposing pt to toxicity and delaying effective therapy
- Rapid taper leads to relapse
- IV prob superior & fewer side effects
- *A small number of pts controlled long term on a small dose*

Orbital Radiotherapy OR

- Dose of 10 - 20 Gy per orbit in 10 - 20 doses over 2 - 20 weeks
- Justin O'Day: OR in pts who respond to steroids ≈ steroid sparer
- Similar effect to oral steroids
- ? additive to steroids [oral, local, IV]
- ? Improves diplopia and ocular motility
- Radiation induced fibrosis does not compromise subsequent therapies

Recent onset thyroid eye disease with restriction of upgaze, some diplopia, inflamed eyes.

Should I be starting this patient on steroids? #1

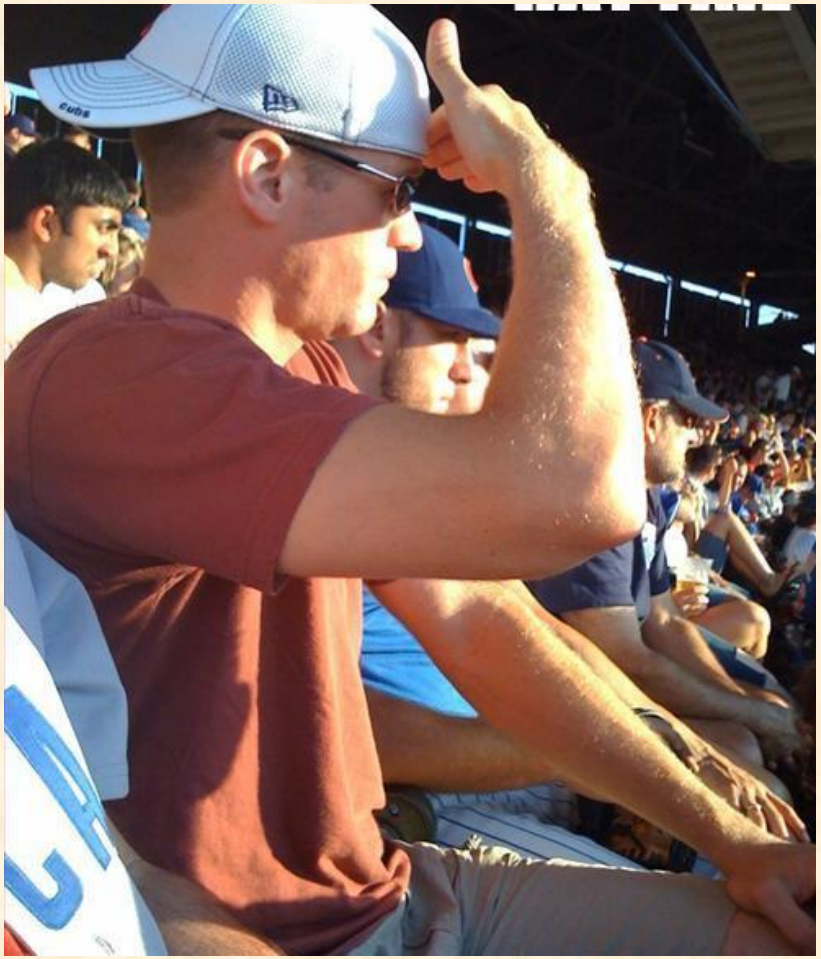
- **Stop smoking – GP to offer all modern pharmacological assistance**
- Optimise biochem control
- RA trial: **Steroids if healthy young pt with some GO about to have RA**

Recent onset thyroid eye disease with restriction of upgaze, some diplopia, inflamed eyes.

Should I be starting this patient on steroids? #2

- After the RA trial, I would discuss steroids in ALL pts with mod-severe GO if steroids were 'safe' for this pt.
- Makes sense
- NO proven long- term benefit e.g. reduced need for strabismus or oculoplastic surgery after 12 mo
- MOST decline to use steroids.
- Only use high dose, start with pulsed steroids
- Plan to use for 3 mo
- Use EUGOGO criteria to monitor progress
- OR as a steroid sparer

Thank you



2nd best:

The Journal of Clinical Endocrinology & Metabolism 94, 2708-2716. 2009

Treatment Modalities for Graves' Ophthalmopathy: Systematic Review and Metaanalysis

H Stiebel-Kalish[1], E Robenshtok[1], M Hasanreisoglu, D Ezrachi, I Shimon and L Leibovici, *Israel.*

Current evidence demonstrates the efficacy of ivcorticosteroids in decreasing CAS in patients with moderateto severe GO. Intravenous pulse corticosteroids therapy hasa small but statistically significant advantage oral therapyand causes significantly fewer adverse events.

Somatostatinanalogs have marginal clinical efficacy.

The efficacy of orbitalradiotherapy as single therapy remains unclear, whereas thecombination of radiotherapy with corticosteroids has betterefficacy than either radiotherapy or oral corticosteroids alone.