Tales of the unexpected.....

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October 2018
Tales of the Unexpected

Set 2
23 Classic Episodes

Tales of the Unexpected

Important message: The Brothers Grimm present:
Tales of the Unexpected
Every Thursday
Paradise Lost
From 9pm till late
Red Eye
Case 1: History & Symptoms

- 17 year old female
- 5 week history foreign body sensation & sticky discharge left eye
- No changes to vision. No contact lens wear
- Optometrist suggested sodium cromoglycate – no difference
- GP prescribed g. chloramphenicol 0.5% – no difference
- GH: Good
- No systemic medication
VA RE: 6/6  LE: 6/6

- Diffuse conjunctival hyperaemia left eye

- Large follicles inferior & superior tarsal conjunctiva left eye only

- Diffuse corneal subepithelial white opacities – non staining

- Anterior chamber quiet

- IOP normal
Differential diagnoses

• Conjunctivitis:
  – Viral/Adenovirus
  – Allergic/Atopic
  – Bacterial
  – Chlamydial

• Toxic reaction/drop hypersensitivity

• Contact lens induced

• Molluscum
Treatment Plan

- Swabbed for bacterial, viral & chlamydia
- Started on ocular lubricants:
  - Carbomer Gel qds
- Review 1 week
Chlamydial conjunctivitis

- Bacterium *chlamydia trachomatis* which is an intracellular parasite
  - serotypes D-K: cause adult inclusion conjunctivitis & Ophthalmia Neonatorum
  - Serotypes A-C: cause trachoma

- Up to 70% have concurrent genital infection which may be asymptomatic

- Almost always sexually transmitted

- Most common in 15–35 year olds
Symptoms

- Symptoms present for more than 2 weeks with most cases unilateral
- Chronic follicular conjunctivitis
- Grittiness & irritation
- Sticky discharge
- Lid drooping
Signs

- Lid oedema
- Mechanical lid ptosis
- Non-tender pre-auricular lymph node swelling
- Mucopurulent discharge
- Large follicles in upper and lower fornices
- Limbal and bulbar follicles may be present
- Subepithelial infiltrates, similar to those seen in adenoviral infection
- Superior epithelial keratitis
- Marginal infiltrates
- Superior pannus
Management & Treatment

• Referral to genitourinary clinic for assessment, treatment & contact tracing

• First line:
  – g. chloramphenicol 0.5% qds
  – Ocular lubricants for comfort

• Systemic treatment by GUM clinic
  – Azithromycin 1g stat
  – Doxycycline 100mg bd 1 week
Case 2

- 24 year old male teacher attended EED March 2016
- 2 week history right eye red, sticky, light sensitive, swollen upper lid
- Recent flu-like symptoms
- Health otherwise good
- GP prescribed g. chloramphenicol 0.5% : no difference to symptoms
On examination

- VA RE: 6/19 ph 6/7.5   LE: 6/7.5
Management

• Treated for herpes simplex keratitis
• Viral swab taken from cornea
• Commenced on Occ Aciclovir 3% 5x/day
• Review 1 week
1 week later

• Vision blurred RE: 6/24 ph 6/12 LE: 6/6

• Photophobia increased

• Painful (pain score 3/10)

• Wears monthly disposable contact lenses – not worn for 2 weeks
On examination

Injection

Radial perineuritis
I was blinded by my contact lens

Man loses eye after flesh-eating parasite from contact lens burrowed into his eyeball

Blinded by a contact lens: Retired engineer is left in agony and unable to drive due to vicious infection caused by tap water

‘A parasite was eating my eyeball’
Acanthamoeba Keratitis

• Free-living protozoans, found in:
  – well water, drains, soil, dust
  – domestic tap water (especially storage tanks)

• Two forms:
  – Trophozoite (most common form found in water and easily destroyed)
  – Dormant form: cyst (highly resistant to disinfection, can survive for long periods in hostile environments)

• Rare in the general population

• Approx. annual incidence: 1.4 per million per annum but much more common in contact lens wearers
Predisposing factors

• >90% cases associated with contact lens wear
  – most are soft lenses (reusable or extended wear)
  – inadequate disinfection
  – use of non-sterile solutions
  – rinsing of storage cases in tap water
  – biofilm of storage cases
  – exposure to shower, pool or spa water

• Agricultural injuries
Talking of contact lens cases….

Laboratory testing found:

- Yeasts +
- Alternaria : genus of fungi. Also common allergens in humans, growing indoors and causing hay fever or hypersensitivity reactions that can lead to asthma.
Symptoms

• Pain (may be severe and out of proportion to degree of inflammation), but may be minimal in early stages
• Visual loss
• Redness
• Epiphora
• Photophobia
• Can be bilateral
• May be a long history and condition may be misdiagnosed as herpetic, bacterial or fungal keratitis
Signs

Early signs:

• epithelial or subepithelial infiltrates
• pseudodendrites
• perineuritis (infiltrates along corneal nerves)
• recurrent breakdown of the corneal epithelium

Later signs:

• deep inflammation of the cornea consisting of a central or paracentral ring-shaped or disciform infiltrate or abscess
• stromal thinning
• extension of inflammation into sclera
• anterior chamber cells and flare
• hypopyon
Differential Diagnoses

• Bacterial or fungal keratitis

• Herpes simplex keratitis with temporary improvement on anti-herpetic treatment, further delaying diagnosis

• Suspect any painful epitheliopathy that:
  – does not respond to normal treatment
  – has known risk factor (e.g. contact lens wear or corneal trauma associated with soil or contaminated water)

**Dendritic keratitis in a contact lens wearer should be assumed to be caused by Acanthamoeba until proved otherwise**
Treatment

• Diagnosis confirmed by corneal scrape
• Cystic form can be imaged by confocal microscopy
• Topical medical treatment with either a biguanide or a diamine or a combination of the two:
  o Biguanides: polyhexamethylene biguanide (PHMB), chlorhexidine
  o Diamines: propamidine (Brolene), dibromopropamidine (Brolene ointment), hexamidine
• Continuous treatment may be necessary for weeks or months
• Topical steroid to limit inflammation
• Penetrating keratoplasty if corneal irregularity, thinning or scarring is severe following complete control of infection
Management in this case

- 1 week review
  - Right upper lid ptosis
  - Severely injected
  - Perineuritis evident
  - KPs present with anterior chamber inflammation
- Corneal scrape performed for Acanthamoeba
- Commenced on
  - Gt PHMB hourly
  - Gt Brolene hourly
  - Gt cyclopentolate 1% tds
- Admitted to ophthalmic ward
Outcome

- Admitted to ward for 10 days
- Monitored in out-patient clinic thereafter
- Treatment gradually reduced over 6 months
- Finally discharged September 2016
- VA on discharge
  - RE 6/5  LE 6/5
- Advice given on contact lens wear
Case 3: History

37 year old Caucasian male attended EED January 2018 with a 2 month history of irritable right eye.
On examination...

- VA: RE 6/12 LE 6/6
- Cornea: RE Mild punctate staining LE Clear
- AC: Quiet both eyes
- Fundus normal R&L
Differential diagnoses

- Blepharitis
- Allergic conjunctivitis
- Atopic keratoconjunctivitis
- Giant papillary conjunctivitis
- Ptosis
- Contact lens complications
- Dermatochalasis
- Ectropion
- Floppy eyelid syndrome
Clues....
Floppy eyelid syndrome

- Non-specific symptoms including:
  - eye irritation
  - long history of unilateral or bilateral ocular redness and discharge.
  - eyelids spontaneously "flipping over" when they sleep due to rubbing on the pillow
  - Not responsive to treatment

- Lateral upper eyelid may appear elongated and overlap the edge of the lower lid margin.
- Chronic severe papillary conjunctivitis with whitish mucus discharge.
Floppy eyelid syndrome

• Often associated with sleep apnea & obesity

• Further questioning revealed:
  
  – Waking up with eyelid ‘inside out’
  
  – Admitted to sleeping on the right side
  
  – Excessive tiredness throughout the day due to constant waking in the night
Management

- Ocular lubricants:
  - preservative free drops for day time
  - Ointment at night

- Cartella shield for protection

- Referral to GP for sleep apnea investigation

- Referral to oculoplastic
Sleep apnea

• Sleep disorder:
  – pauses in breathing or periods of shallow breathing
  – Can last from few seconds to many minutes
  – May be choking afterwards or snorting
• Disrupts normal sleep causing tiredness during day
• Risk factors:
  – Obesity
  – Allergies
  – Family history
Case 4 - History

- PK
- 52 year old female
- Contact lens wearer
- Right eye became red, irritable and photophobic
- She removed her lenses
- Attended Emergency Eye Department at MREH - very long wait so went to local eye department
Differential Diagnosis – unilateral painful red eye

- CL related microbial keratitis
- Acute anterior uveitis
- Acute angle closure glaucoma
- Herpes simplex keratitis
- Herpes zoster keratitis
- Scleritis
1st A&E visit

- Doctor thought CL still in eye
- Tried to remove CL
- Patient had advised it wasn’t in situ
2nd A&E visit

- Following day, right eye had increased pain
- Attended different local eye department
- Diagnosed with a corneal abrasion
- Prescribed g.chloramphenicol 0.5% qds
3rd A&E visit

• Back to MREH EED
• Still red, painful, photophobic right eye
• No lens wear since it had started

• Any ideas of diagnosis....
• What would you want to know?
Examination

• Red eye with circumlimbal injection
• Shallow AC
• IOP: R 52 L 20 mmHg
• R angle closed
• Left angle very narrow

• Lens opacity seen - what was it?
Glaukomflecken

- “glaucoma flecks”
- Anterior subcapsular lens opacity
- Usually within pupillary aperture
- Lens epithelial necrosis
- High pressure in anterior chamber pushes iris against lens
- Leads to mechanical damage and/or build up of toxins
Treatment

- Commenced on maximal topical, oral and IV medical therapy
- IOP came down to 38mmHg
- YAG PI to both eyes
- R eye pressure still not controlled at 42-44mmHg
- Listed for cataract surgery under glaucoma team
Prognosis

• Delay in early diagnosis made attack hard to break
• Still on quadruple topical therapy and IOP 24mmHg
• May need a trabeculectomy to control IOP long term
• Fellow eye will have better prognosis
Case 5: Patient Details

• JW

• 39 year old male

• Taxi driver

• GH normal, nil medications, nil allergies

• Presented with sore left eye and a painful rash on forehead and left side of face

• Likely diagnosis?
Examination

• VA R 6/5   L 6/6
• Rash typical of HZO (Herpes Zoster) over forehead and top eyelid of left eye
• Left eye red
• Swollen upper lid
• Negative Hutchinson’s sign (no vesicles on end/side of nose)
• Anterior chamber activity: cells++
• IOP R 18   L 21 mmHg
• Dilated fundus examination normal
Diagnosis & Treatment

• Herpes zoster ophthalmicus with anterior uveitis

• Aciclovir 800mg x5/day for 10 days

• Predforte 1% qds L eye only

• Cyclopentolate 1% bd L eye only

• Acute follow up clinic 1 week
1st review - AFC

• VA R 6/5  L 6/7.5, feeling better
• Using tablets and drops as prescribed
• Rash still present, lid not swollen
• Negative Hutchinson’s
• IOP R 22 L 21 mmHg
• Small keratic precipitates left eye
• Cells ++/- L eye
• Still red L eye
• Fundus healthy R & L
Importance of fundal check

- Acute retinal necrosis
- Viral inflammatory condition
- Watch for any unexpected reduction in VA
- Referral to uveitis specialist
Ongoing management

• Patient was not asked which eye he was using his drops in
• Patient seemed to be improving...
• Continue as before
• Review in consultant 'on call' clinic
1 month later...

• Consultant clinic - seen by HW

• VA R & L 6/5

• Stopped tablets, using drops to right eye not left eye

• Right eye anterior chamber deep & quiet

• Left eye anterior chamber a couple of KP’s and Cells +

• Left eye red, rash resolved
1 month later...

- IOP R 38   L 14 mmHg
- CCT R 582microns   L 583 microns
- Gonioscopy open Grade 4 R & L
- CDR 0.3 R & L – rest of fundus normal
- A few viterous cells in L eye, none in R eye

Diagnosis?
Diagnosis & management

- Right eye steroid responder
- Left eye secondary anterior uveitis to HZO

Plan

- Stop drops right eye
- Predforte 2 hourly 3 days, x6/day 1 week, qds 1 week, tds 1 week, bd 1 week & od for 1 week then stop left eye only
- Cyclopentolate 1% bd L eye only 1 week
- Cosopt bd L eye until steroid finished
- Review in 4 weeks
Outcome

- Settling
- IOP R 14 L 12 mmHg
- Finish course of treatment
- Discharge
FLOATERS.....
Questions to ask

- When did you first notice? Duration?
- Present in 1 or both eyes?
- Size & shape?
- Any better, worse or similar since onset?
- Any associated symptoms?
  - ?flashes
  - ?change to vision
  - ?shadows
- Any refractive error
- Any recent head trauma
Case 6

- 43 year old Jamaican female attended EED February 2018
- 3 days ago fell in bathroom as felt faint and banged head on floor. Left eye now has bruising and swelling around it with redness of the conjunctiva. No photophobia, no diplopia. Also noticed floaters in right eye since the fall.
- Patient consulted GP who ordered blood tests and advised EED
- POH: nil
- GH: Feeling ‘under the weather recently’
- Meds: nil
- Allergies: nil
On examination

- **VA:**
  - RE: 6/9
  - LE: 6/9

- **Conj:**
  - RE: white
  - LE: Sub conj haem

- **Cornea:**
  - RE: KPs +
  - LE: clear

- **A/C:**
  - RE: cells +/- (+)
  - LE: D&Q

- **IOP:**
  - RE: 10mmHg
  - LE: 15mmHg

- **Vitreous:**
  - RE: vitreous cells++
  - LE: clear
    - Snowballs inferiorly

- **Retina:**
  - RE: No focal lesions
  - LE: healthy
Anterior segment
Fundal examination
OCT Imaging
OPTOS

Large serous macular retinal detachment
Differential Diagnoses

• Sarcoidosis
• Toxocariasis
• Syphilis
• Tuberculosis
• Toxoplasmosis
• HLA-B27 Syndromes
• Juvenile idiopathic arthritis
• Multiple sclerosis
• Idiopathic
1 week later

- VA: RE: 6/7.5  LE: 6/7.5
- IOP: 16mmHg R&L
- Signs of vitritis in right eye confirmed
- Topical steroids to be tapered down
- Blood results all normal, still waiting for chest x-ray report
Vitritis/Intermediate Uveitis

- Vitreous is the main site of inflammation
- Pars planitis: snowballs or snowbanking with no sign of associated infection or systemic disease
- Accounts for 10% of cases of uveitis
- Most common in young adults, second peak in the elderly
- Males = females
- Bilateral in 80% of cases but may be asymmetric
Clinical features

- Floaters
- Reduced VA, maybe due to cystoid macula oedema (CMO)
- Cells in the vitreous
- Snowballs or snowbanking
- Anterior inflammation is common
- Complications: CMO, cataract, tractional retinal detachment, neovascular membrane
Investigations

• Rule out other causes with bloods & chest x-ray
  – Baseline: FBC, U&E, ESR, VDRL, urinalysis, IGRA (Interferon Gamma Release Assay)
  – Referral for Mantoux test

• Primary ocular: Idiopathic after exclusion of other associations

• Secondary systemic:
  – Multiple sclerosis – consider MRI brain
  – Sarcoid – Chest x-ray, ACE, CT thorax
  – Inflammatory Bowel – biopsy

• Secondary infective:
  – Toxocara
  – Lyme disease
Treatment

• Observation

• Topical
  – If significant anterior activity treat with topical steroids and mydriatics

• If CMO consider periocular steroids if unilateral or oral steroids if bilateral or resistant disease
Update...August 2018

- Chest X-ray normal
- Positive Mantoux test: tests for immunity to tuberculosis using intradermal injection of tuberculin
- Diagnosis: bilateral presumed TB associated uveitis
Treatment

• Topical PredForte steroid eye drops
• Cyclopentolate 1%
• Oral Prednisolone 40mg for 1 week then tapering....now on 20mg
• Omeprazole 20mg od
• Anti-tuberculosis therapy: Voractive & Pyridoxine
Case 7: EED 6/6/2018

• Patient
  – Male
  – Caucasian
  – Polish
  – 25 years old
  – GH good, Nil medication

• Presented as walk in – self referral
• 1 week history of floaters in left eye only
• No redness
• No pain

• Differential diagnosis.....
Differential Diagnosis

• PVD

• Retinal hole/tear/detachment

• Vitreous haemorrhage – especially if diabetic

• Vitritis – could be a number of conditions
Examination

- **VA:** R 6/6  L 6/7.5
- **AC:** Deep and quiet both eyes
- **IOP:** R 13  L 14mmHg
- **Lens:** Clear both eyes
- **Dilated examination**
- **Vitreous:** R Normal  L vitritis
- **Fundus:** Normal both eyes
Initial Diagnosis and management

• L intermediate uveitis

• Bloods
  – Trep EIA (Syphilis screen)
  – FBC
  – ACE (Sarcoidosis)
  – Chest X-Ray (TB/Sarcoidosis)

• OCT – poor quality but no CMO

• Review AFC 11/6/2018
AFC with me 11/6/2018

- Examination as previously
- No new findings found in AC
- L vitritis still present
- Blood tests all normal
- Chest X-Ray results not available

- Management...
Assessment in uveitis AFC

- VA: R 6/6   L 6/7.5
- AC: R Deep and quiet, L cells+, stellate KP’s
- IOP: R15 L 15mmHg
- Lens: Clear both eyes
- Dilated examination
- Vitreous: R Normal L Vitritis
- Fundus: Normal both eyes
- Management...
Fuch’s Heterochromic Iridocyclitis

• First described by Austrian ophthalmologist Ernst Fuchs in 1906

• Chronic unilateral uveitis

• Associated with:
  • Heterochromia
  • Cataract - PSC
  • Glaucoma

• Causes:
  • Infection with toxoplasma gondii, HSV, Rubella
  • Neurogenic
  • Autoimmune
Fuch’s Heterochromic Iridocyclitis

- Treatment:
  - Do not need to treat the uveitis
  - Treatment of the cataract as normal – care with post-op inflammation
  - Treatment of any secondary glaucoma – raised IOP
Acknowledgements

Imaging department, MREH

Greg Harding Photography