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Cataract Surgery and Ocular Surface Disease

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APPROACH

- What Cataract surgery can do to the Ocular Surface

- What Ocular Surface Disease can do to Cataract Surgery



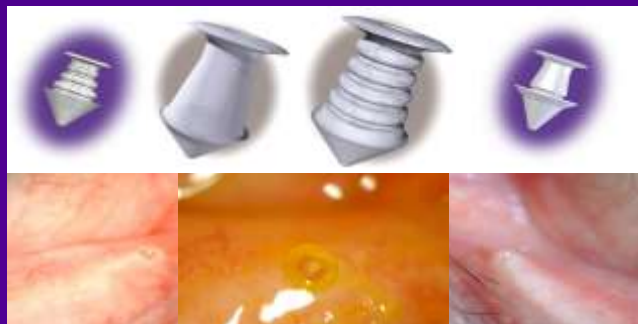
Blepharitis: Potential risk for endophthalmitis and Dry eye

Temporal incision avoids tangling with eye lashes

Povidone Iodine 5% for 3 minutes

DRY EYE

- Post-operative tear film abnormality can reduce quality of vision after cataract surgery
- Important to recognise and treat it: medically or with punctal plugs (reversible)

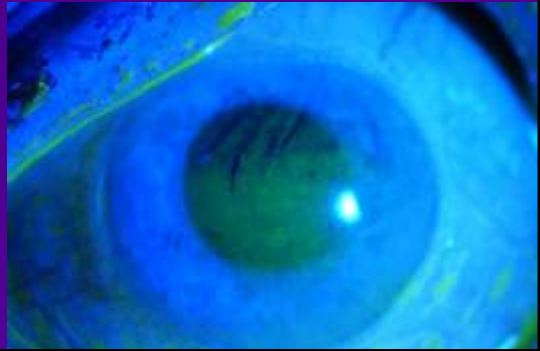




Post Phacoemulsification

Persistent SPK (Dry Eye)

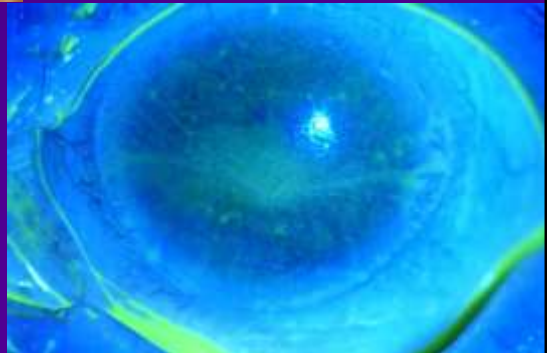
- Borderline Dry Eye
- Exposure during surgery
- Various eye drops/preservatives
- OS inflammation

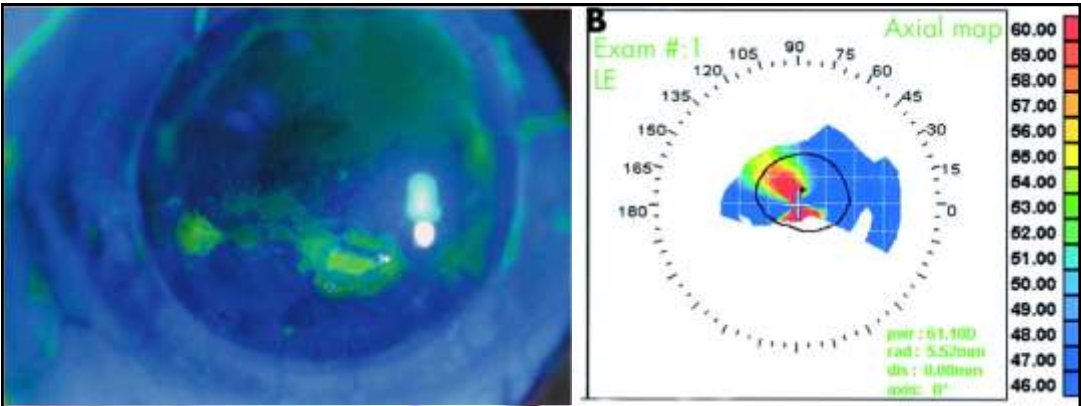


Extra-capsular cataract extraction

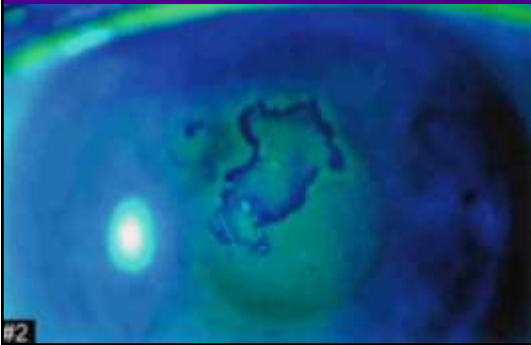
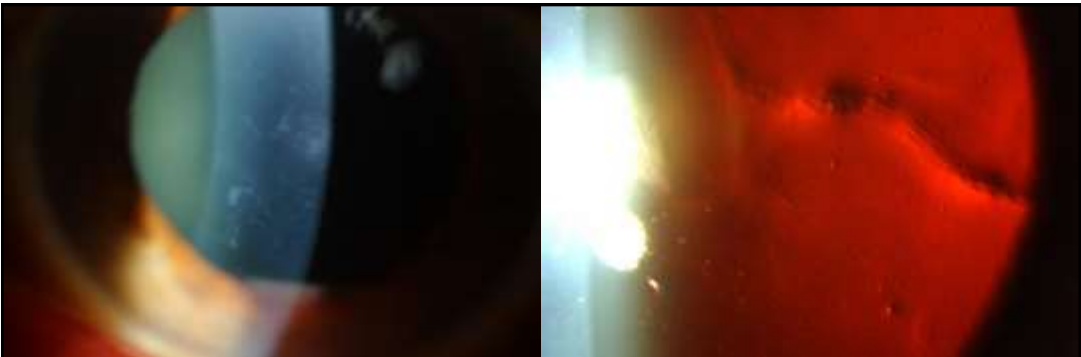
Persistent SPK 'Dry Eye'

- Nerve transection - hypoaesthesia
- LRI – 80% depth – most limbal nerves will be cut
- ALTERED CURVATURE





Altered or irregular Corneal Curvature
Look out for tight sutures - ECCE, Phaco



**ANTERIOR BASEMENT
DYSTROPHY**

Not usually a problem until the
epithelium is inadvertently
disturbed

Recognise and 'handle with
care'

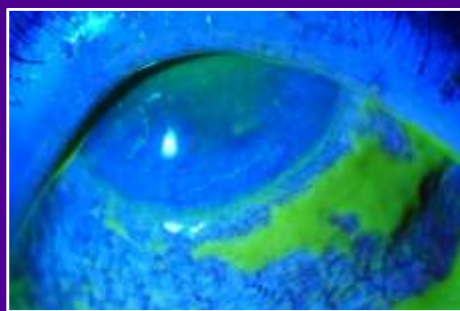
Drug Toxicity



The 'up-down' sign of drug toxicity

Dua HS, Said DG, Faraj L et al BJO 2012

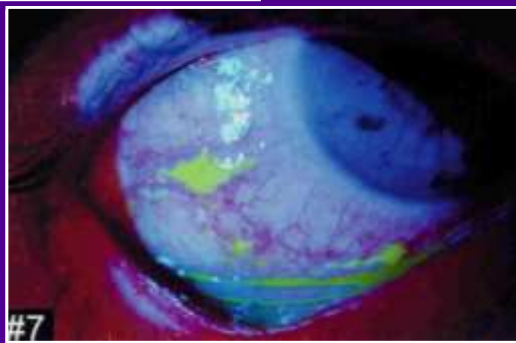
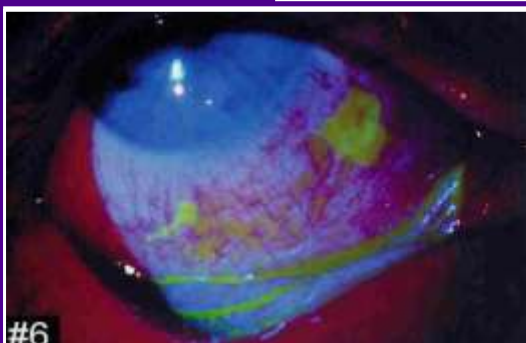
- Treat underlying cause where possible.
- Remember drug toxicity



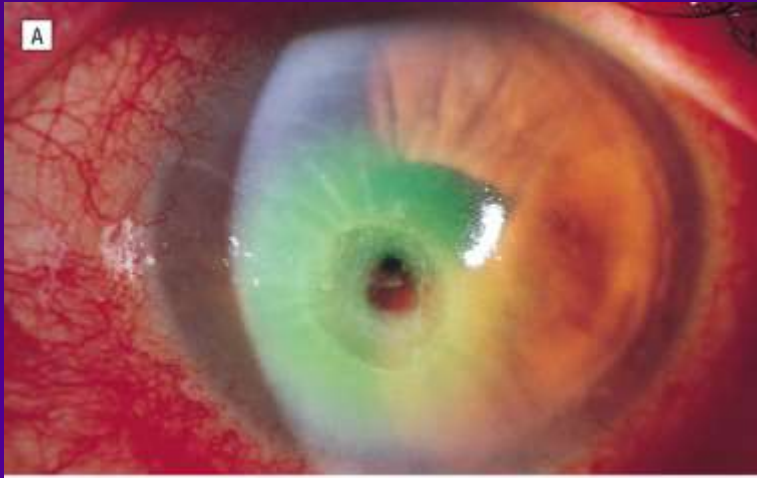
Drug
Toxicity



Top
Bottom
Difference



Topical NSAIDS (Diclofenac)

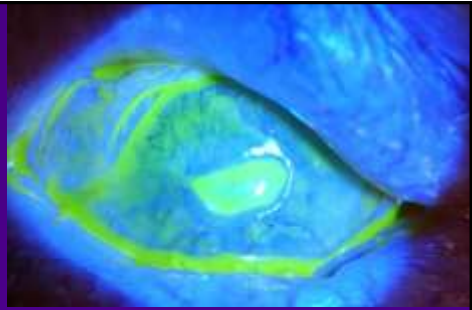
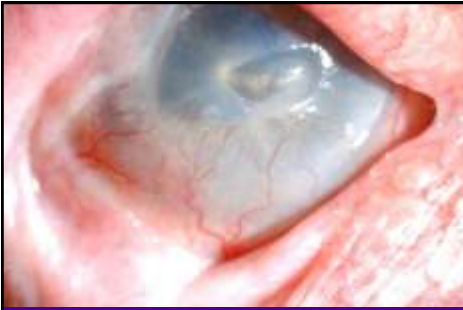


Lin JC et al. Arch Ophthalmol, 2000

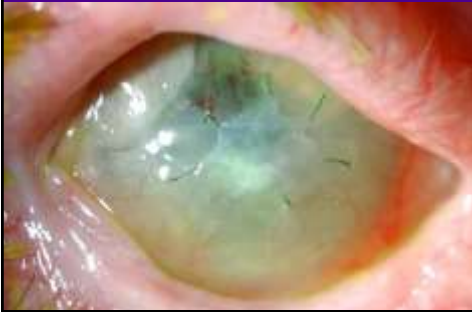
OCULAR CICATRICIAL PEMPHEGOID

- Risk of aggravation/flare up of inflammation following surgery
- Pre-operative immunosuppression and longer post operative steroids
- Avoid conjunctival intervention

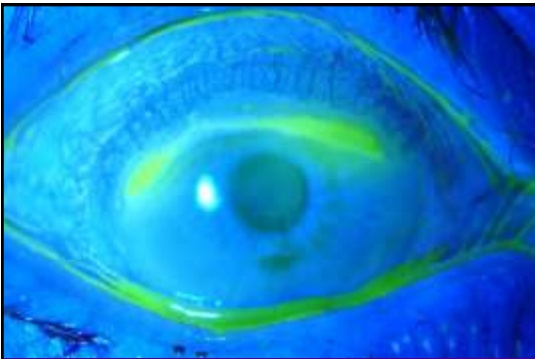
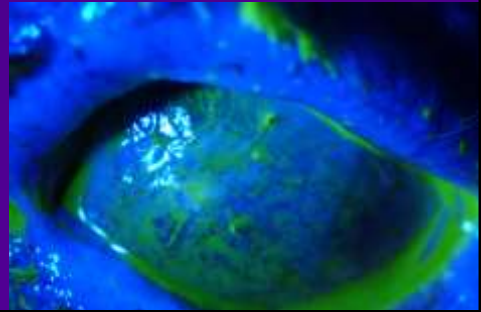




Ocular Cicatricial Pemphigoid (OCP)

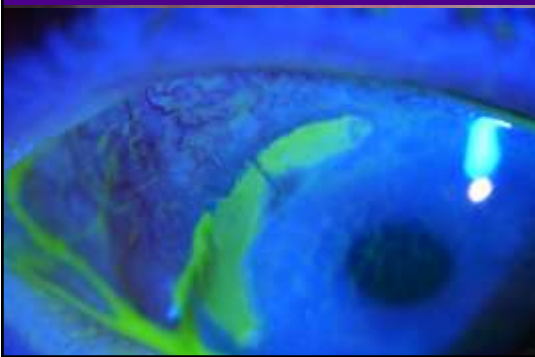


Amniotic Membrane



Collagen Vascular Disease

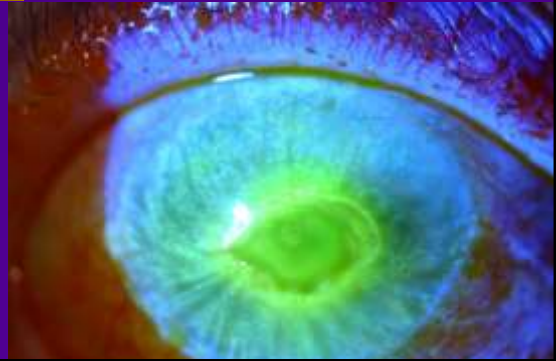
- Risk of corneal and scleral inflammation and melts
- Consider Sclero-corneal tunnel and suture





Post Cataract Central Corneal Melt

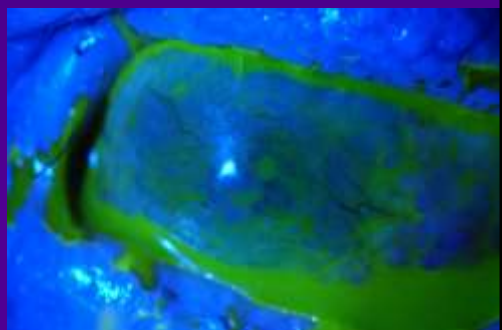
- ECCE
- Known Rheumatoid Arthritis



Ocular Surface Stem Cell Deficiency

Chemical Burn: Lens Intumescence
'Urgent' lens extraction, poor visibility
ECCE is a viable option

Vision Blue helps





Ocular Surface Stem Cell Deficiency

Chemical Burn: Progressive corneal scarring, iris atrophy and adhesion

Phacoemulsification with pupilloplasty



Pseudophakic Bullous Keratopathy

- Ascending corneal edema post phacoemulsification
- Retained Nuclear fragment
- Gonioscopy
- Multiple examinations due to changing position of fragment(s)

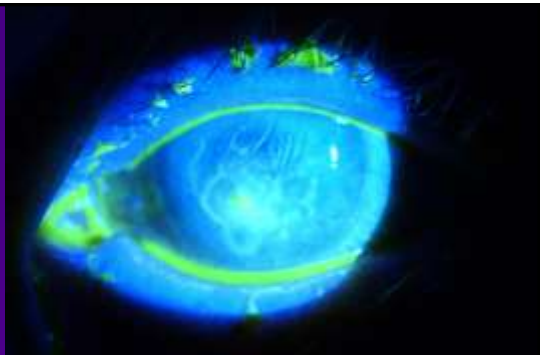


FUCHS ENDOTHELIAL DYSTROPHY

- Low endothelial cell count, pleomorphisim and polymegathism, with normal corneal thickness
- Phacoemulsification: easy to end up with pseudophakic bullous keratopathy

Strategy:

- Sclero corneal tunnel
- Viscoat (chondriotin sulfate and hyaluronate)
- Large Rhexis
- Low flow, low phaco in plane of pupil
- IOL implant under healon
- Suture to tunnel, Acetazolamide, steroids



Cataract with PK in Ocular surface disease

Active Keratitis: Avoid cataract extraction? Risk of endophthalmitis

Glue at time of PK

TAKE HOME MESSAGE(s)

- **Cataract surgery can aggravate or influence course of borderline or underlying ocular surface conditions such as Dry Eye, OCP, Rheumatoid eye disease**
- **Ocular surface diseases and drugs used to treat them can affect outcome of cataract surgery**
- **Several ocular surface conditions such as SCD related to chemical burns, can lead to rapid onset of cataract requiring removal in difficult conditions – raised pressure, poor visibility, OS or intraocular inflammation**
- **Evaluate the patient and Eye well and make a Strategy**
- **ECCE, Vision blue, Scleral rather than corneal incision, wound sutures**
- **Appropriate immunosuppression**



THANK YOU