

# Epiphora (sic) in Adults



COMBINED MEETING OF  
**RANZCO** &  
Tasmania Branch of the Royal Australian and New Zealand College of Ophthalmologists  
**ANZSOPS**  
Australia and New Zealand Society of Ophthalmic Plastic Surgeons

21-23 JUNE 2019  
Hotel Grand Chancellor, Hobart Tasmania

Oculoplastic Surgery for the Comprehensive Ophthalmologist

**Ian Francis**  
**Ocular Plastics Unit**  
Prince of Wales  
Hospital, Sydney

# NOW.....

## History and examination for diagnosis in a patient with a watery eye



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**'Question-mark Appearance  
of the Colon'**

**NEJM of 230519**

**Tearing: we need to ask the questions...**

# Epiphora (sic) in Adults!

- We do not mean this...
- What we really mean is:

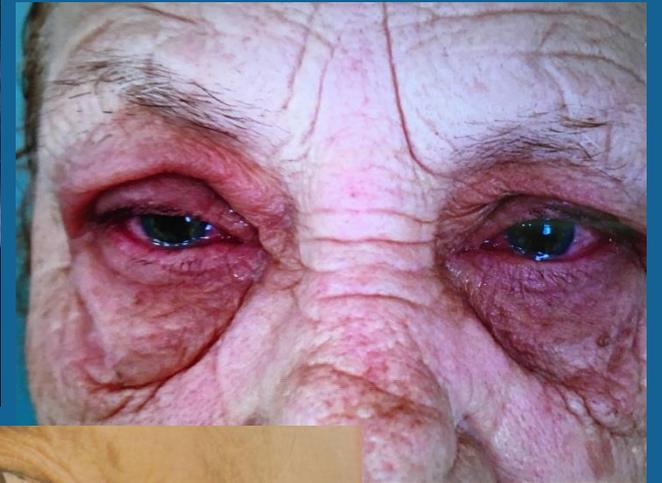
## Tearing in Adults

Thus we can quote the patient

**“Doctor, my eye/eyes is/are watering”**

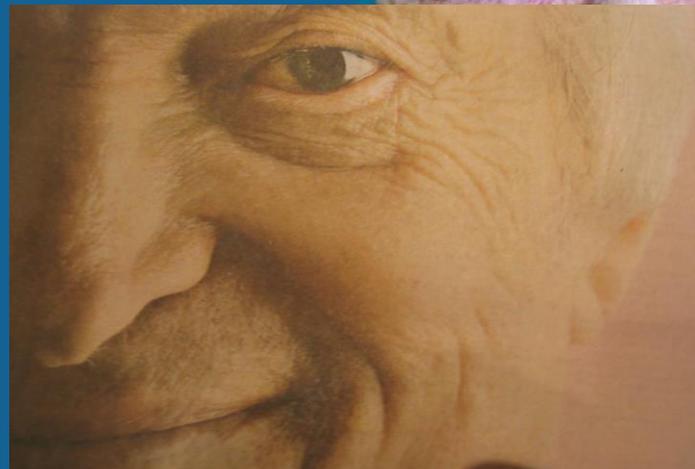
Three types of Tearing or watery eyes...

1. Epiphora



2. Lacrimation

3. Plerolacrima





# Three types of Tearing or watery eyes...

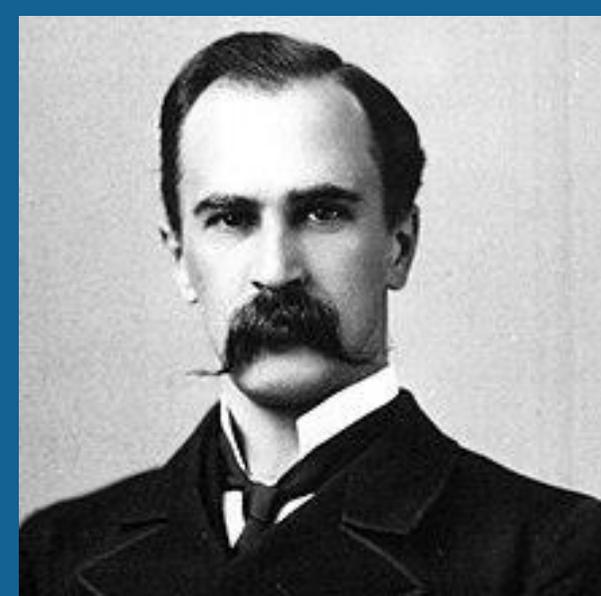
Question: How do we sort this...?

Answer: Listen to an eminent clinician...

“Listen to the patient... the patient is trying to tell you the diagnosis.”

...regarding his or her watery eyes 😊

**Sir William Osler (1849-1919)** 1st Baronet, FRS, FRCP  
Canadian Physician at McGill University in Montreal



**‘The best-known Physician in the English-speaking world’.**

- When Osler left for Europe he had planned to become an Ophthalmologist - 1884 😊
- Then went to Johns Hopkins Hospital, Baltimore.
- His book *The Principles and Practice of Medicine* was the most influential general medical text for a period of 40 years used around the world.
- Osler helped introduce a new emphasis on bedside clinical instruction.
- He focused on vigorous support of the importance of medical history for students and practitioners
- In 1904, Osler was offered the Regius Professorship of Medicine at the University of Oxford by King Edward VII

**What could possibly be next?**

Dr M. B. (Kappa) Kappagoda

A dynamic and unique Australian Ophthalmologist with outstanding knowledge and comprehension of Ophthalmology, Neurology and General Medicine

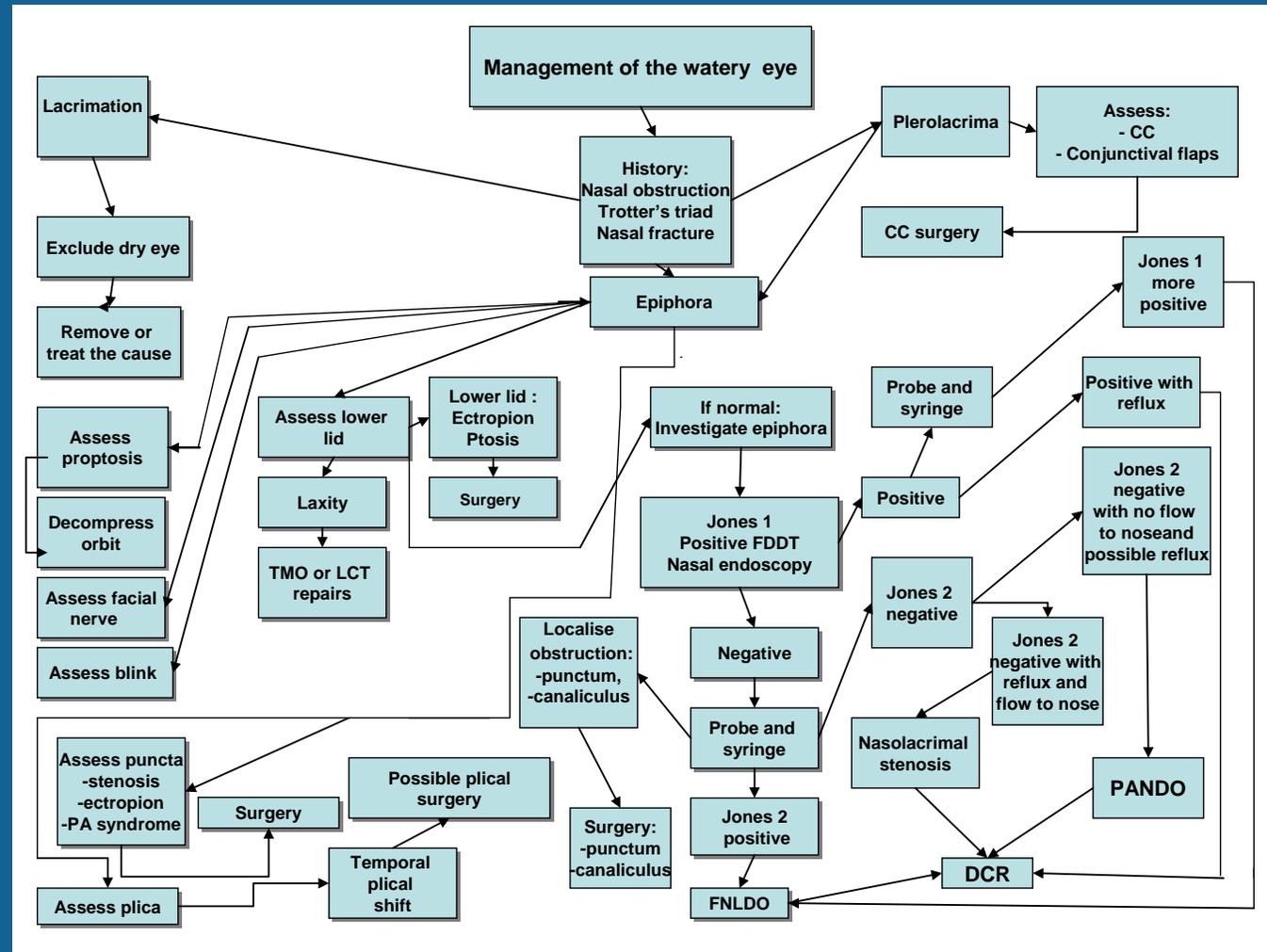
A tribute to Dr Medduma B. Kappagoda : [Clin Exp Ophthalmol. 2005;33:414-6](#)

“The patient is  
**DESPERATELY** trying to  
tell you the diagnosis.”

...as to his or her  
watery eyes 😊



# Don't do this – there are only three categories of tearing for historical diagnosis

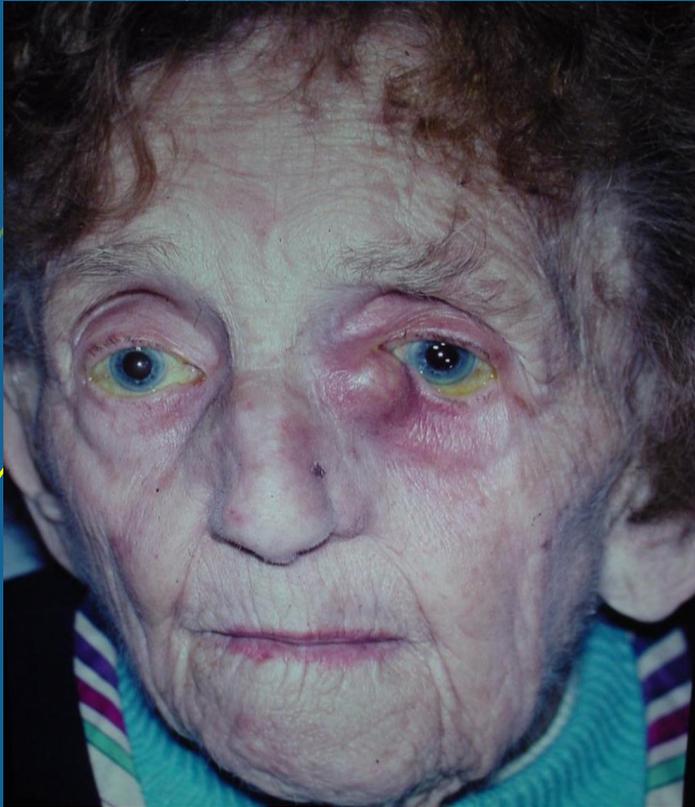


# Tearing in Adults

## Scenario 1: Epiphora 1

- ▶ Tears are seen or felt on the cheek - Greek ἐπιφορά: ἐπι 'upon' + φέρειν φέρειν 'to bear or carry' (...the cheek)
- ▶ Patient has no ocular surface or other symptomatology
- ▶ **INSPECTION** of the patient's face, facial nerve function, ocular position, lids, puncta: 3 seconds \*
- ▶ An obstruction to tear fluid drainage exists somewhere along the lacrimal drainage pathway so...  
**Perform Lacrimal syringing/ irrigation/ lavage/ sac washout**

# Epiphora

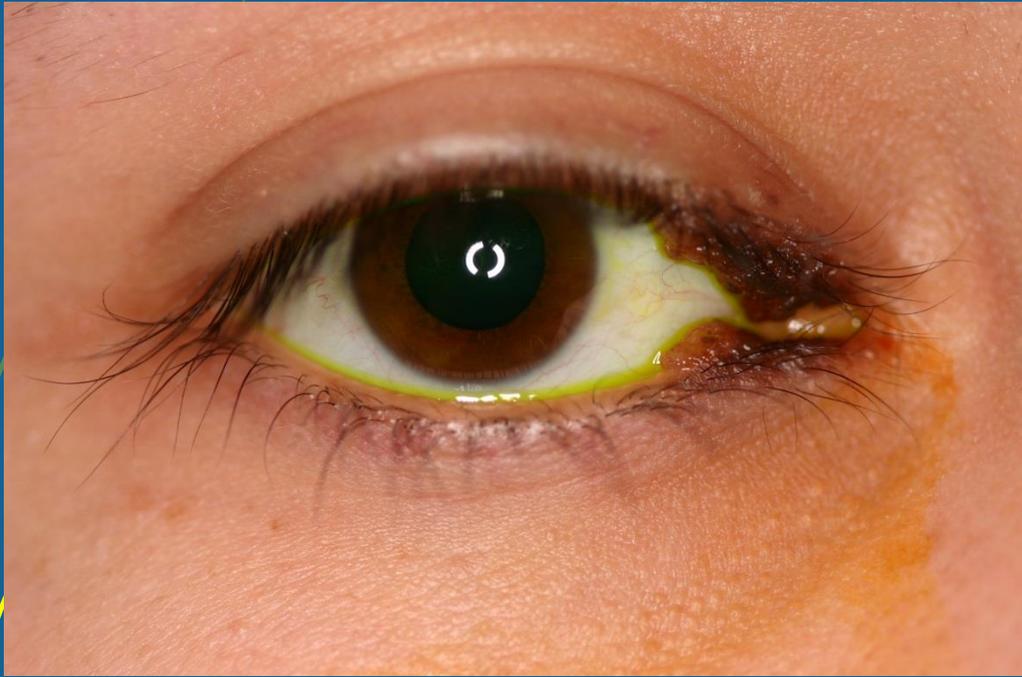


Left mucopyocele

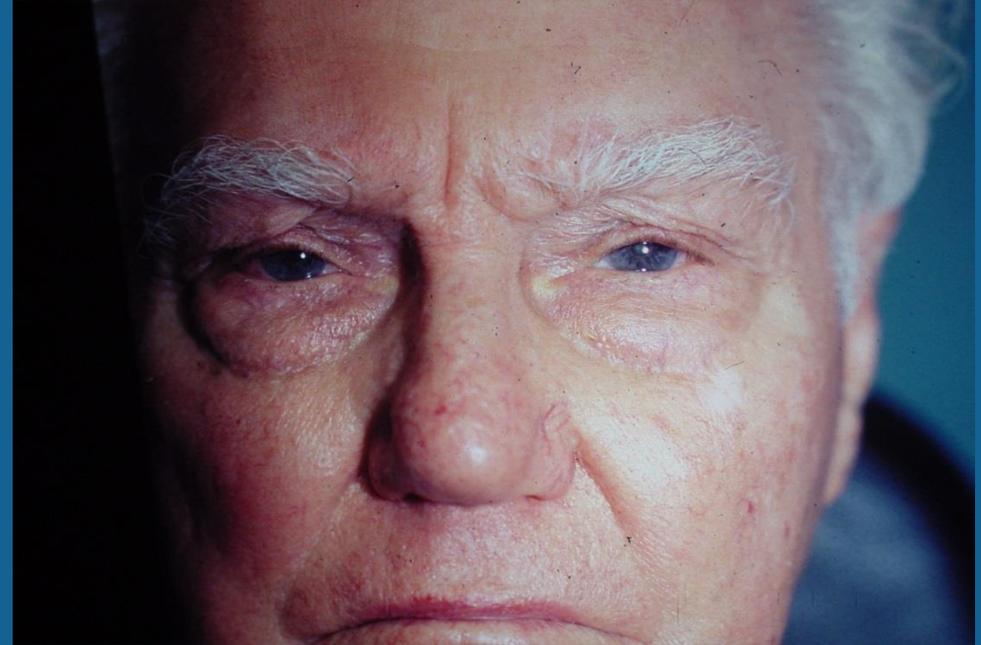


Congenital NLDO

# Epiphora



Kissing naevi of the puncta  
**Note elevated MTF**



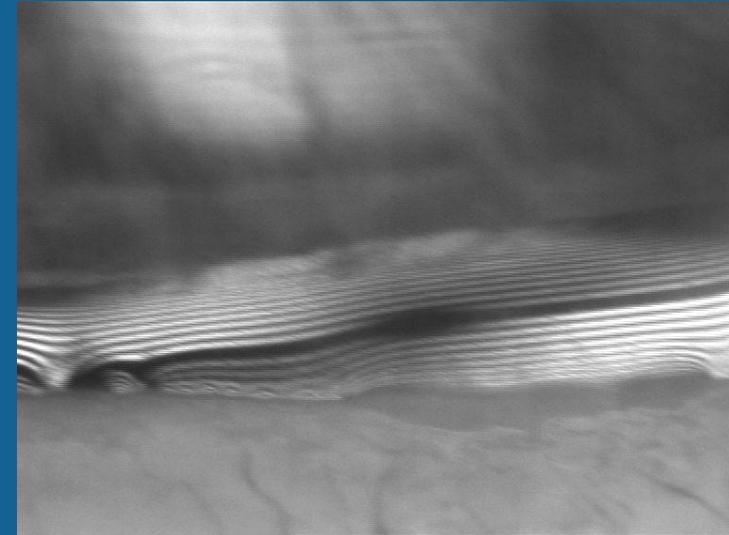
**Punctal Apposition Syndrome**

# Epiphora

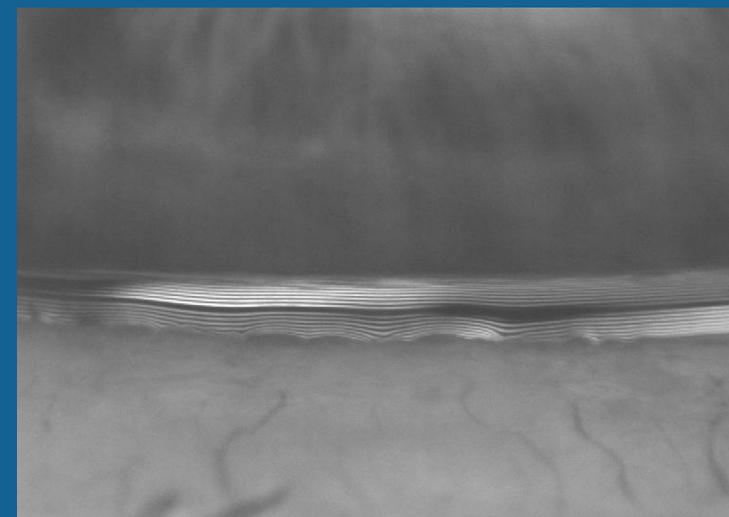
Tear Meniscus Height pre and post DCR surgery evaluated by VRD (Video Reflective Dacryomeniscometry)



Lid Tension is important in patients with watery eyes



Pre  
DCR

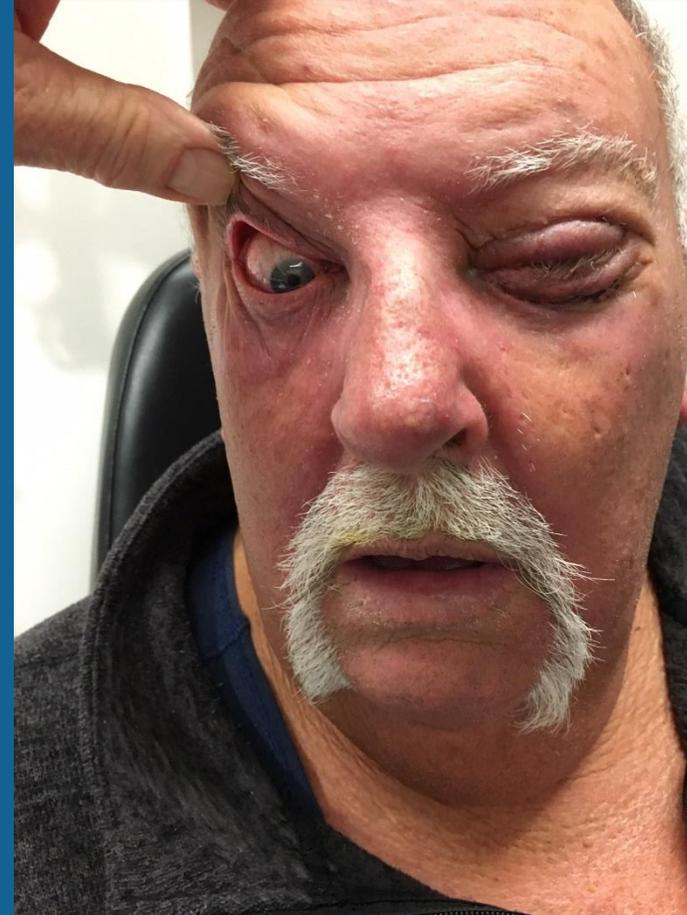


Post  
DCR

# Epiphora



R lower lid ectropion  
L lids early postop



Elevation of R UL because of suspicion  
of lax upper & lower lids → diagnosis of  
OSA → saves life and corrects ED

**NB: The 22  
Manifestations  
of OSA and the  
Visual system**

# Tearing in Adults

## Scenario 1: Epiphora 2

- ▶ **Hydrostatic lacrimal sac massage** is performed:  
3 seconds per side
- ▶ **Fluorescein Dye Disappearance Tests (DDT)**...best to describe appearance which is
  - ▶ fluorescein remains **visible** or
  - ▶ fluorescein has **disappeared**
- ▶ **De rigueur: Jones 1 and Jones 2 testing** are carried out using rigid nasal endoscopy

# Hydrostatic sac massage



# Rigid Nasal Endoscopy



## DDT

- Fluorescein dried on L lateral canthal skin
- R fluorescein and mucus persist

# Consider **(1)** Trotter's Triad: diagnostic of nasopharyngeal carcinoma

- ▶ Ipsilateral deafness
- ▶ Ipsilateral facial pain
- ▶ Ipsilateral paralysis of soft palate/clicking in the ear

## Nasopharyngeal Carcinoma

U/L conductive  
hearing loss (Secretory  
otitis media)

@medical\_mescal

Trotter's  
Triad

I/L earache  
& Facial pain  
( Trigeminal  
nerve)

I/L paralysis of the  
soft palate



## Consider (2) Signs and Symptoms of Nasal and Paranasal Sinus Cancers

- Ipsilateral nasal obstruction
- Epistaxis
- Mass of face, nose, palate, orbit
- Watery eyes
- Hearing loss

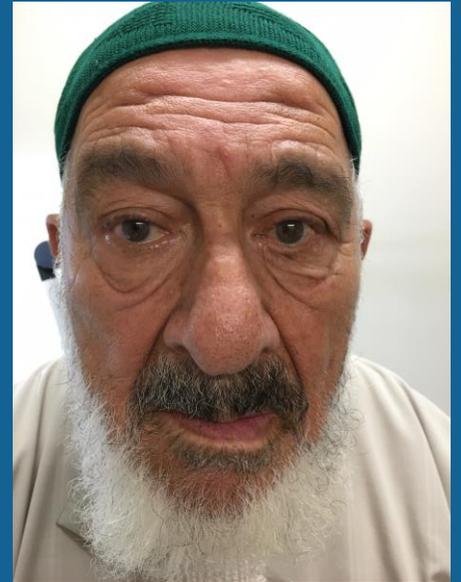
## Tearing in Adults

### Scenario 2: Lacrimation 1

- The patient generally has **ocular surface or other symptomatology** (e.g. conjunctivitis, foreign body, emotion...)
- **Tears are also found on the cheek but in response to one of the above so: Lacrimal syringing/ irrigation/ lavage/ sac washout**
- **The lacrimal drainage pathway is intact**

# Directed history for diagnosis of lacrimation

- ▶ Patient complains that: "I have pins and needles in my eyes and they water"
- ▶ Doctor thinks of causes of paraesthesiae in the eyes with associated lacrimation
- ▶ Thus examines all cranial nerves especially trigeminal and corneal sensation - takes one minute and 40 seconds → all normal



So we flip his lids and...



...stain the concretions with **Fluorescein**....



\*\*\* So he really had 'pins OR needles' and lacrimation....'

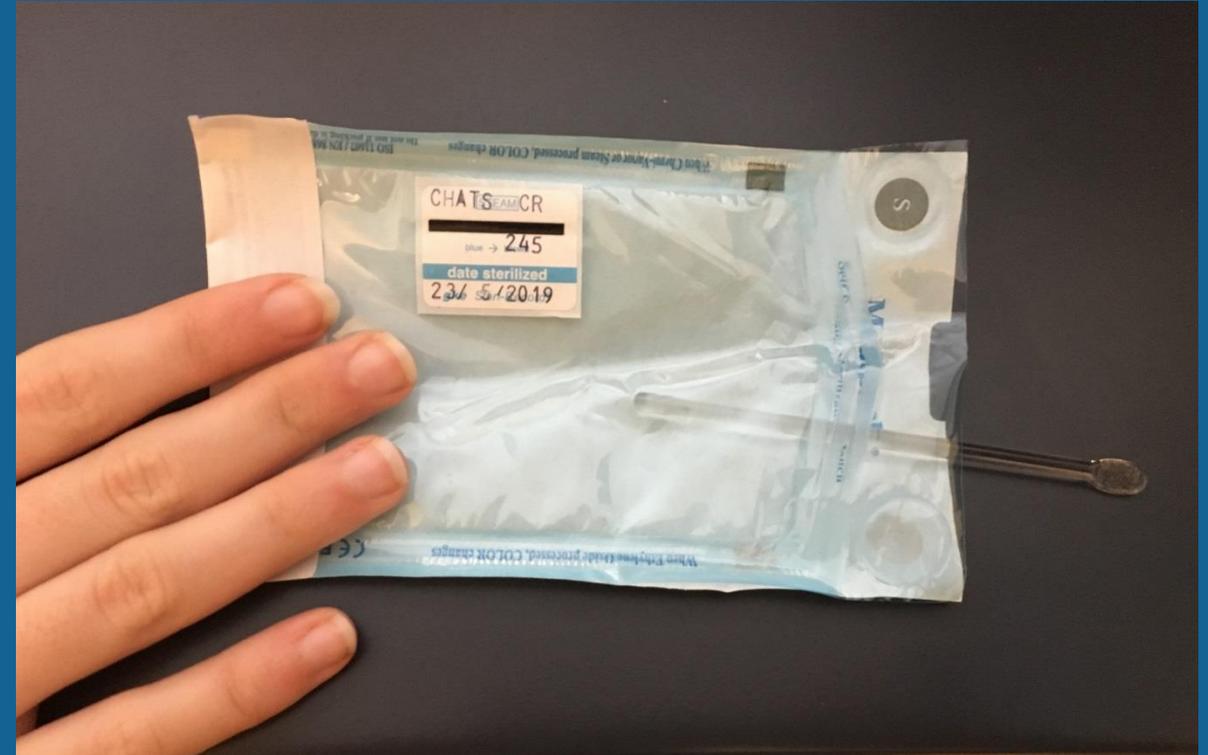
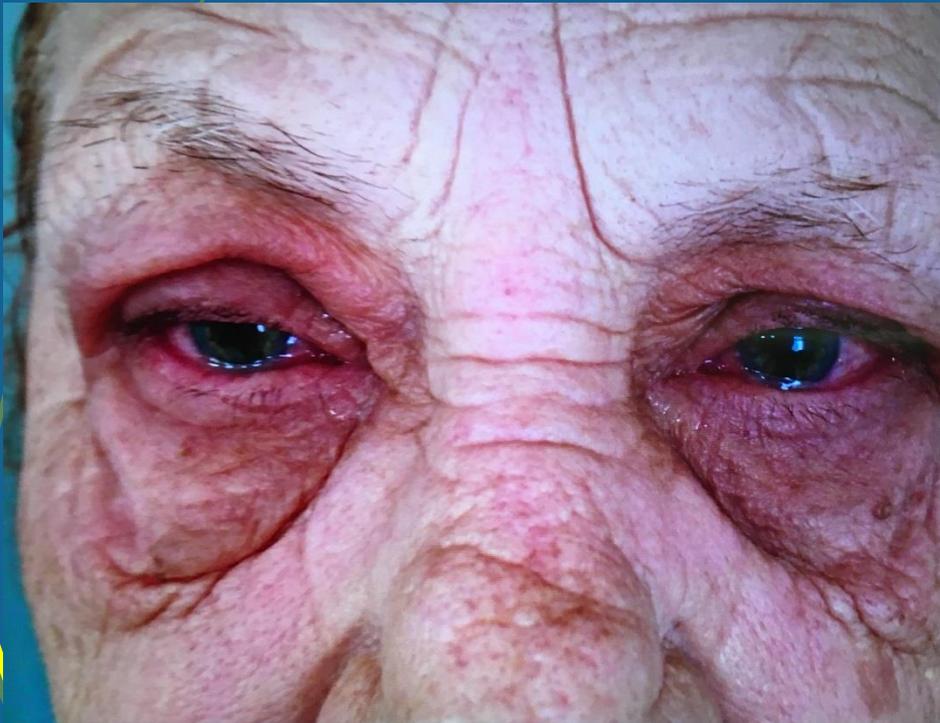
## Tearing in Adults

### Scenario 2: Lacrimation 2

- The usual thorough **INSPECTION** of the patient's face, facial nerve function, ocular position, lid margins and position, puncta
- **Hydrostatic lacrimal sac massage** is also performed
- **Double or triple everted eyelid examination** bilaterally  
N.B.: glass rod and topical anaesthesia
- **Jones 1 and Jones 2 testing** are carried out

# Lacrimation

## Allergic blepharooconjunctivitis



Glass rod for triple eversion of lids to locate/exclude a foreign body

# Tearing in Adults

## Scenario 3: Plerolacrima 1

Greek πληρώω (*pléroó*) = full of + Latin *lacrima* = tears

AKA previously: Lacrorrhoea (favoured by Professor Tim Sullivan)

**‘The presence of watery eye symptomatology consisting of a wet eye, without tears running onto the cheek’**

- ▶ The patient generally has minimal or no ocular surface or other symptomatology
- ▶ The patient is inspected on the slit lamp, looking particularly for conjunctivochalasis\*, lid margin irregularities, and elevated MTF best seen on dedicated VRD
- ▶ ...so... Lacrimal syringing/ irrigation/ lavage/ sac washout
- ▶ There is no obstruction to tear fluid drainage

# Tearing in Adults

## Scenario 3: Plerolacrima 2

**Michael : PLEROLACRIMA patient from the Rooms...**

Ian to Michael in April 2019 : “Please write and tell me what you have just told me”

“ Hi Ian :

**When I close off my PC or my TV my eyes fill with tears which remain in the eyes and do not run down my face even though I blink to dislodge them.**

The tears stay a little while in the eyes and drain away when I move about the house.

**When I close my eyes they feel dry.**

Best wishes,  
Michael”

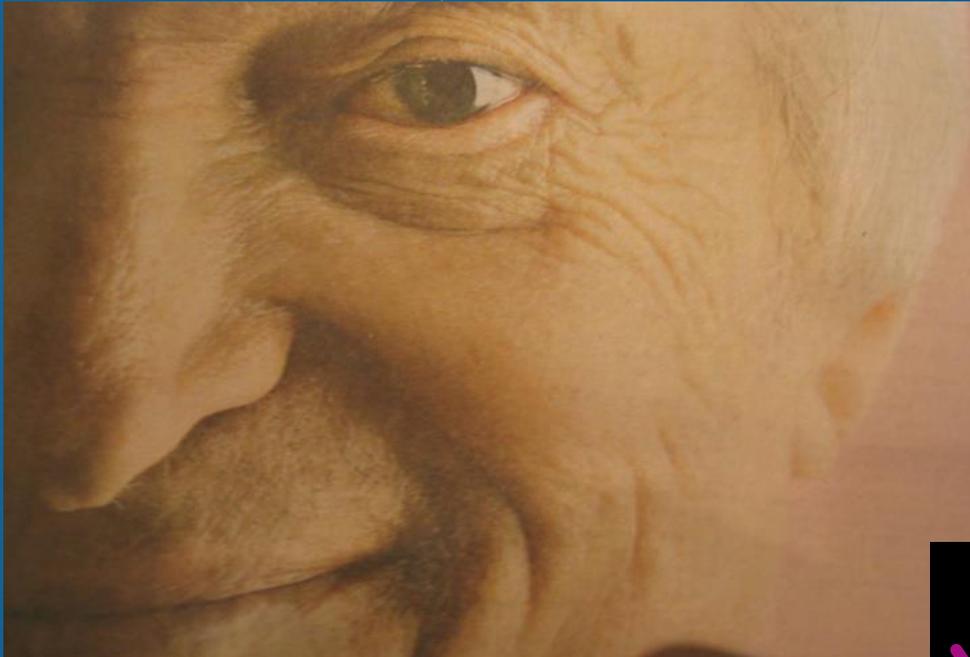
# Tearing in Adults

## Scenario 3: Plerolacrima 3

- ▶ The usual thorough inspection of the patient's face, facial nerve function ocular position, lid position, puncta is still performed
- ▶ Hydrostatic lacrimal sac massage is performed
- ▶ Triple everted lid examination
- ▶ Jones 1 and Jones 2 testing are carried out

# Plerolacrima

# Conjunctivochalasis



Richie has  
conjunctivochalasis  
plus an elevated MTF



Temporal shift  
of most of the  
plica



- 1.a. Examiner's L middle finger on LL
- 1.b. Examiner's R finger/thumb on barrel
- 1.c. Third Hand (Dr Nicole S. Lim)



- 2.a. Examiner's L index finger & thumb transfer to cannula-barrel junction
- 2.b. Examiner's L middle and ring stabilise LL & punctum

## Technique of lacrimal syringing/ irrigation/ lavage/ sac washout

without pain and  
with confidence

3. Examiner's R finger/thumb  
transfer to plunger/barrel



4. Longitudinal movement along  
canaliculus is always good

# Technique of lacrimal syringing/ irrigation/ lavage/ sac washout

- To avoid complications, the dacryologist must use a technique that is safe, gentle, and atraumatic
- This technique described provides the conditions for a pain-free and stress-free experience for the patient and the surgeon

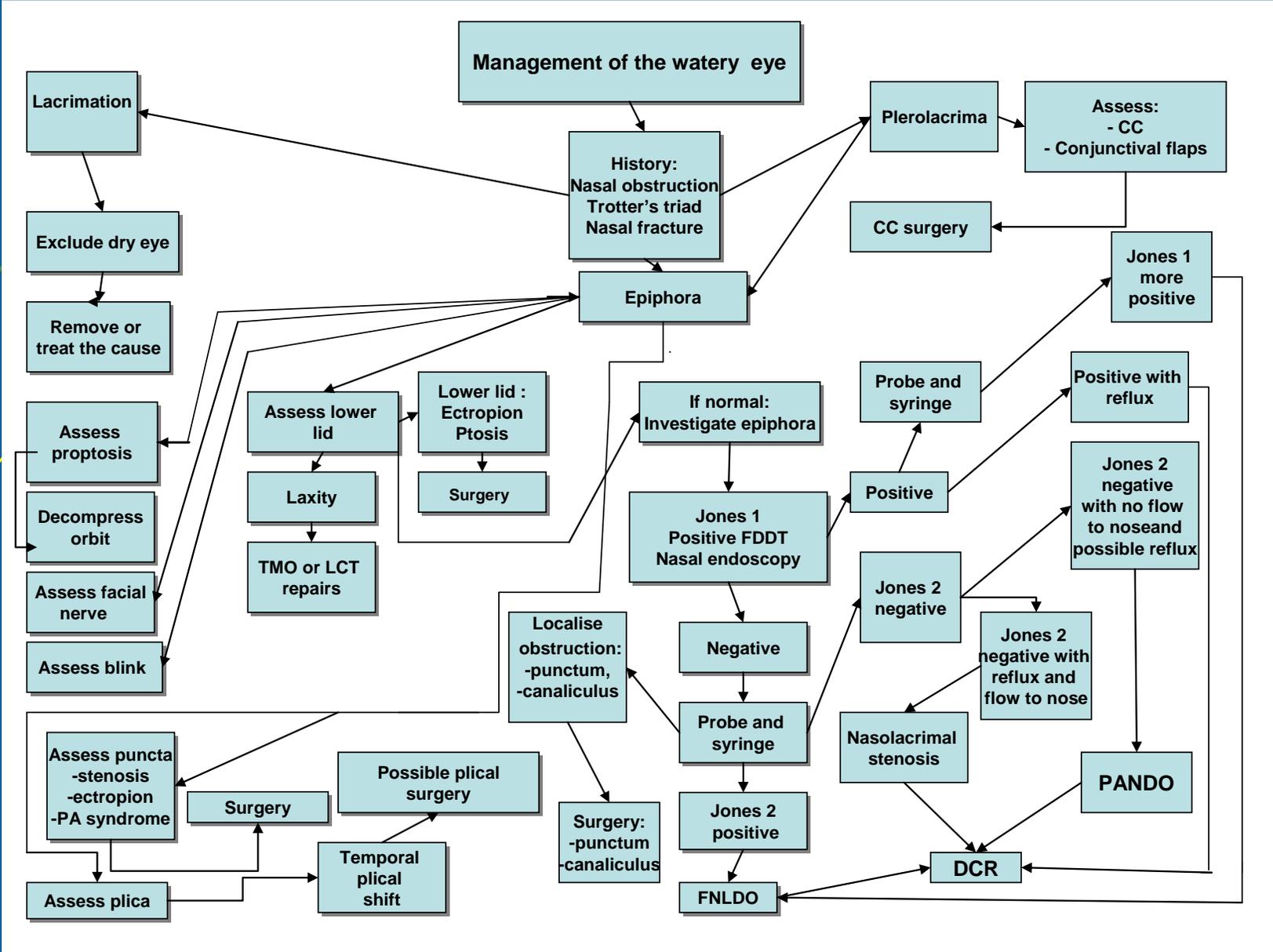
Dubey R, Stringfellow GJ, Wilcsek G, Coroneo MT, Francis IC. **Atraumatic and Systematic Lacrimal Syringing: A Photographic Analysis**  
Techniques in Ophthalmology, 2011; 9:68-70



# Possible complications of Lacrimal Irrigation

1. Patient pain and distress
2. Canalicular infection/trauma
3. Canalicular false passage
4. Localized cellulitis
5. Dacryocystitis
6. Unreliability of findings because of #1-3

# Management of the Watery Eye: NO!



But if you like Flow Diagrams: it does make sense.

What we want is this approach or a slightly quicker one...

# Wills Eye Institute 5-Minute Ophthalmology Consult

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# Watery Eyes made Quicker...

1. Look at the patient
2. Ask patient about his or her tearing and associated nasopharyngeal and sinus symptoms
3. Squeeze (the fundus of lacrimal sac)
4. Instill 2% fluorescein and observe
5. Rigid nasal endoscopy (maybe)
6. Saline irrigation

**LASIRS**

# Using diagrams like these, talk to the patient

