

## Acute Lacrimal Disease



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*Royal College of Ophthalmologists, Annual Congress, 2011*

## Acute lacrimal disease *An ancient curse..*

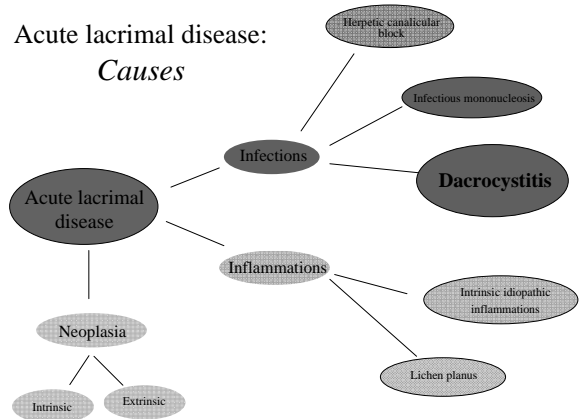


## And a dark art ...



Tempo della lacrimazione cronica. «Praxis Chirurgica» di Teodorico. Miniatura del XIII secolo. (Biblioteca Universitaria di Leida)

## Acute lacrimal disease: *Causes*

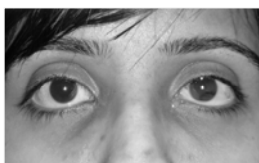


## Lacrimal symptoms

### 'Flow symptoms'

(Inadequate tear outflow)

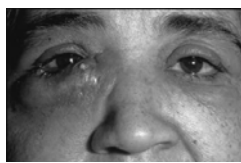
1. 'Wet' eyes
2. Raised tear meniscus
3. Skin irritation
4. Epiphora (overflow)



### 'Volume symptoms'

(Backwash of sac debris)

1. Gummy lids
2. Matted lashes
3. Expressible mucocoele
4. Dacryocystitis

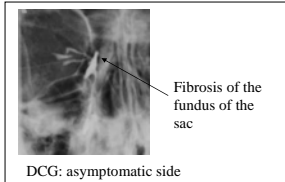
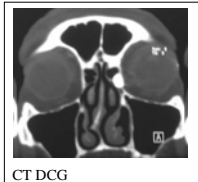
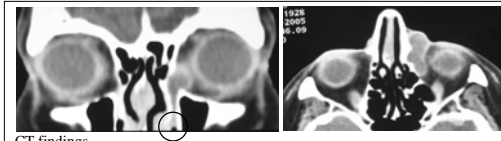


## Investigation of acute lacrimal disease

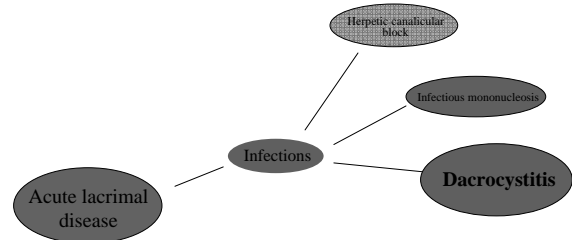
- Good history and clinical examination.
- Mucocoele: a clinical diagnosis.
- Imaging: if globe displacement with an apparent mucocoele.
- Syringing / imaging if:
  - Atypical signs – e.g. swelling above the MCT
  - Globe displacement
- If possible extrinsic lesions - nasendoscopy and CT.

## Imaging

(Not routinely indicated)

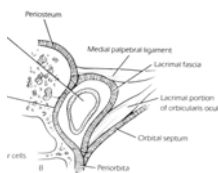
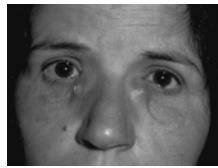


## Causes of acute lacrimal disease



## Acute dacryocystitis - Natural history

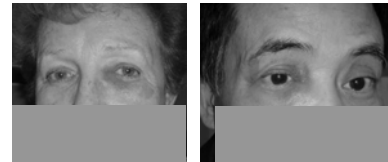
- Inflammation of the mucosa & wall of the nasolacrimal sac
- Usually, but not exclusively, associated with a mucocoele
- Recurrent
- Associated toxic tear film
- +/- fistula to overlying skin
- Eventual fibrosis of sac



## Acute dacryocystitis - Symptoms

Painful, swollen, non-reducible lacrimal sac  
Localised redness due to pericystitis or cellulitis

Rubor  
Dolor  
Tumor  
Calor



## Dacryocystitis - Causes

Age related nasolacrimal duct stenosis

Acquired nasolacrimal duct obstruction

- Inflammatory - Chronic nasal disease (Sarcoidosis)
- Infective – Actinomyces, mycobacterium, mycoses
- Trauma & Tumour

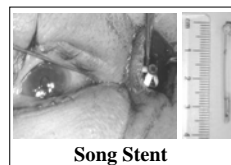
Foreign bodies & Doctors!

- Dacroliths: in ~ 5 % of DCRs (intermittent obstruction)

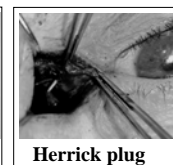
Diverticulae of the sac

## Foreign Bodies

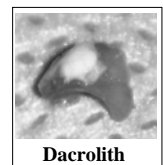
- Any FB within the lacrimal drainage system induces mucosal inflammation
- Secondary stenosis
- Ultimately, these FBs require removal



Song Stent



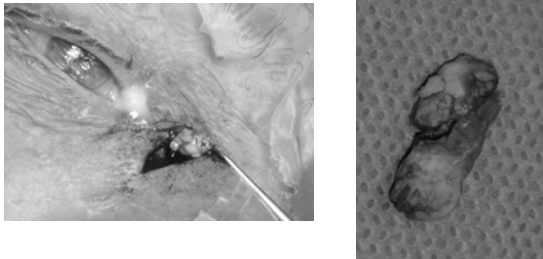
Herrick plug



Dacrolith

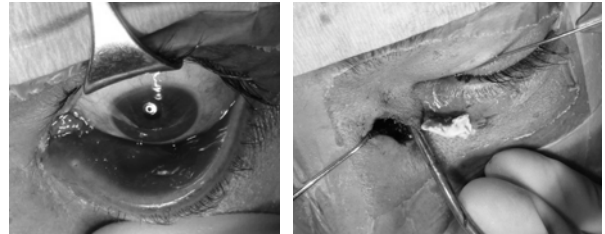
## Dacroliths

- Always open sac completely
- Ensure all of the dacrolith has been removed



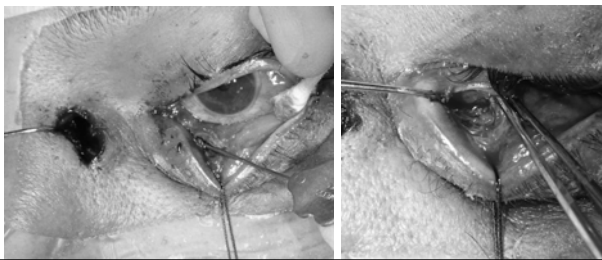
## Lacrimal diverticulitis

- Intermittent symptoms
- Syringing can be normal (!)
- Diverticulae can be huge



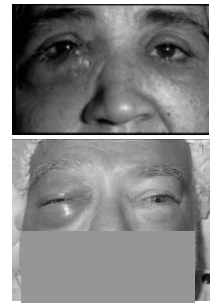
## Lacrimal diverticulitis

- Dacryolith likely
- Identify the diverticulum, open sac fully, & excise diverticulum if possible

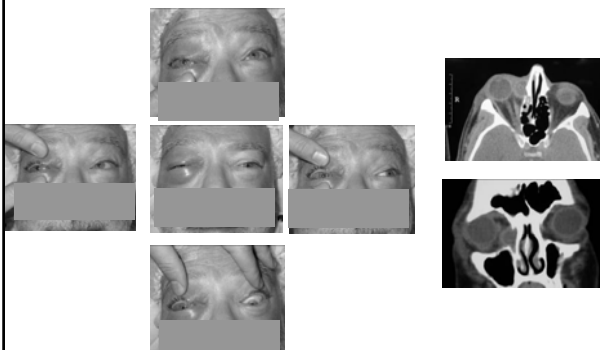


## Acute dacrocystitis - Complications

- Fistula
- Orbital cellulitis (rarely)
- Necrotising fasciitis
- Fibrosis of the sac



## Complications: Orbital cellulitis



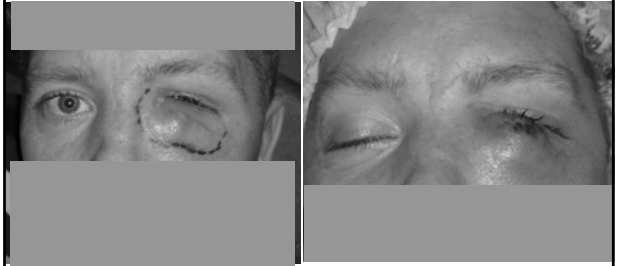
## Management - Immediate

- Topical antibiotics – G Chloramphenicol qds
- Broad spectrum oral antibiotics Cephalexin 250 mg qds
- Intravenous antibiotics for more severe cases
- Dacryocystostomy – under LA
  - No 11 Blade
  - ? Pack with ribbon gauze
  - *Laterally* placed incision

## Subsequent Management

- Early lacrimal drainage surgery (DCR & tubes) – within 2- 3 weeks
- External approach permits -
  - Membranectomy if present
  - Easier identification of pathology within sac
  - Tissue biopsy
- Per- and post-operative antibiotics
- Intubate – remove stent after at least 6 weeks

## Early lacrimal surgery



- 25 yr male, previous medial canthal injury - road accident
- Mucocoele, presents with acute dacryocystitis

## What would you do ?

- Admit
- I/V antibiotics
- Abscess drained
- Then ?
- .. DCR and tubes

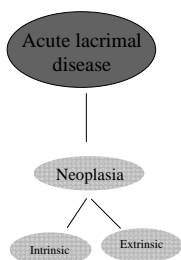


## Does drainage interfere with lacrimal surgery ?

- No – quite the opposite of course !
- Perform DCR surgery at the same time providing the medial canthal area is not too inflamed
- Place the draining incision lateral



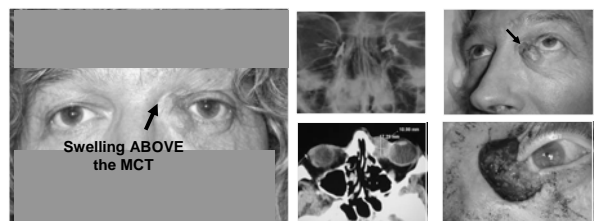
## Causes of acute lacrimal disease *Intrinsic and extrinsic mass*



## Acute lacrimal disease

### *Intrinsic lesion – sac neoplasia*

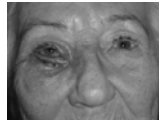
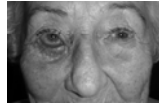
- A 53 year old man is referred with epiphora & ‘dacryocystitis’
- CT showed a solid mass
- Biopsy identified transitional cell tumour of sac.
- Local excision, then exenteration



## Acute lacrimal disease

### *Intrinsic lesion – sac neoplasia*

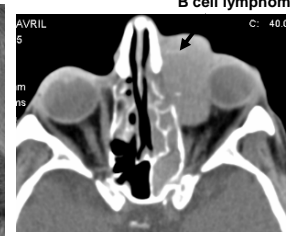
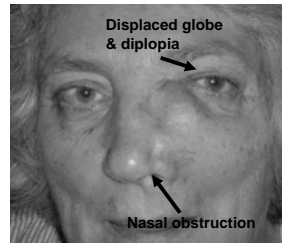
- 83 year old lady
- Recent flow symptoms & ectropion
- Referred routinely for ectropion
- Palpation revealed solid mass
- Biopsy: Squamous cell carcinoma
- Rhinotomy and excision (ENT)
- Correction of ectropion before DXT



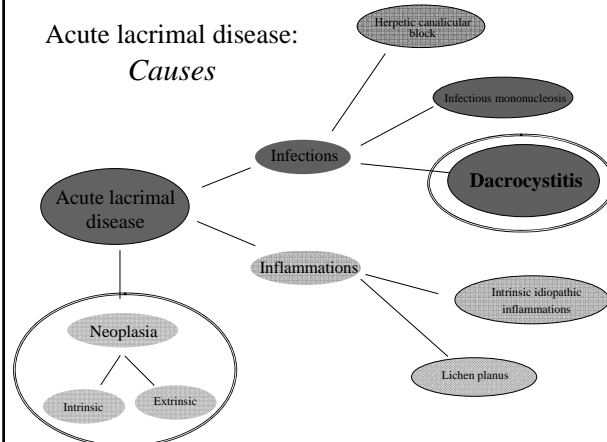
## Acute lacrimal disease

### *Extrinsic lesion – lymphoma*

- Rapidly progressive swelling and tenderness at the medial canthus, with epiphora.
- Nasal obstruction, globe displacement
- Dx – High grade B cell lymphoma



### Acute lacrimal disease: *Causes*



## Dacrocystitis - Keypoints

- Usually associated with a mucocoele
- *But be aware that other pathology may masquerade as a mucocoele*
- May recur in failed lacrimal surgery
- Drain the abscess to hasten recovery

## Haemostasis and Horticulture ?



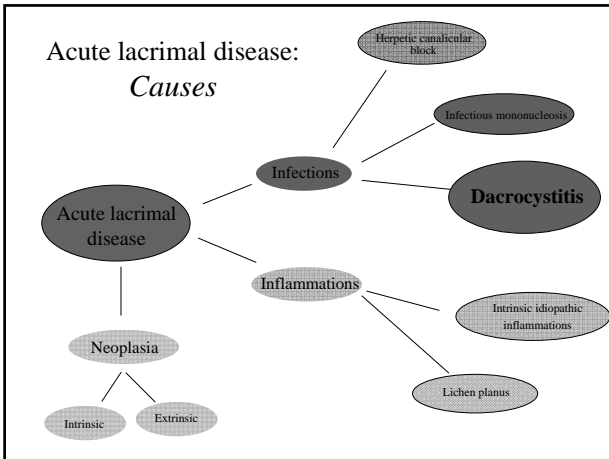
Ginkgo biloba   Ginseng   Ginger   Garlic

Ajoene has antiplatelet effects related to altered metabolism of arachidonic acid .

## Avoiding postoperative lacrimal haemorrhage


- No NSAIDs for 3 weeks (including garlic /ginger /ginko /ginseng)
- Cardiac stents, clopidogrel, the warfarinised patient – check with cardiologist. INR must be < 2
- Consider dacrocystectomy for recurrent dacrocystitis in the warfarinised patient (valve)
- Peroperative haemostasis –
  - Positioning / BP / good access / sutured flaps / platelet trappers / bonewax





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