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OCULAR DISEASE

CHRONIC DACRYOCYSTITIS



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Introduction

- Chronic dacryocystitis is more common than the acute dacryocystitis.
- **Etiology**

The etiology of chronic dacryocystitis is **multifactorial**. The well-established fact is a vicious cycle of *stasis and mild infection of long duration*. The etiological factors can be grouped as under:

 - ✓ **A. Predisposing factors**
 - ✓ **B. Factors responsible for stasis of tears in lacrimal sac**
 - ✓ **C. Source of infection**
 - ✓ **D. Causative organisms**



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A. Predisposing factors

- 1. Age.** It is more common between **40 and 60 years** of age.
- 2. Sex.** The disease is predominantly seen in **females (80%)** probably due to comparatively **narrow lumen** of the bony canal.
- 3. Race.** It is rarer among **Negroes** than in **Whites**; as in the former NLD is shorter, wider and less sinuous.



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4. **Heredity.** *It plays an indirect role. It affects the **facial configuration** and so also the length and width of the bony canal.*
5. **Socio-economic status.** *It is more common in **low socio-economic** group.*
6. **Poor personal hygiene.** *It is also an important predisposing factor.*



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B. Factors responsible for stasis of tears in lacrimal sac

1. **Anatomical factors**, which retard drainage of tears include:
 - ✓ Comparatively **narrow bony canal**,
 - ✓ **Partial canalization of membranous NLD**
 - ✓ **Excessive membranous folds in NLD.**



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2. **Foreign bodies** in the sac may block opening of NLD.
3. **Excessive lacrimation**, primary or reflex, causes stagnation of tears in the sac.
4. **Mild grade inflammation of lacrimal sac** due to associated recurrent conjunctivitis may block the NLD by epithelial debris and mucus plugs.



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5. Obstruction of lower end of the NLD *by nasal diseases such as*

- ✓ Polyps,
- ✓ Hypertrophied inferior concha,
- ✓ Marked degree of deviated nasal septum,
- ✓ Tumours and atrophic rhinitis
- Causing stenosis may also cause stagnation of tears in the lacrimal sac



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C. Source of infection

- Lacrimal sac may get infected from the
 - ✓ **Conjunctiva,**
 - ✓ **Nasal cavity (retrograde spread)**
 - ✓ **Paranasal sinuses**



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D. *Causative organisms*

- **Staphylococci, Pneumococci, Streptococci and *Pseudomonas pyocyanea*.**
- *Rarely chronic granulomatous* infections like **tuberculosis, syphilis, leprosy** and occasionally **rhinosporiodosis** may also cause dacryocystitis.



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Clinical picture

1. Stage of chronic catarrhal dacryocystitis.

- It is characterised by mild inflammation of the lacrimal sac associated with **blockage of NLD.**
- In this stage the only symptom is ***watering eye and sometimes mild redness*** in the inner canthus.
- On *syringing the lacrimal sac*, **either clear fluid or few fibrinous mucoid flakes regurgitate.**



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2. *Stage of lacrimal mucocoele.*

- It follows chronic stagnation causing distension of lacrimal sac. It is characterised by constant *epiphora associated with a swelling just below the inner canthus.*
- Milky or gelatinous mucoïd fluid regurgitates from the lower punctum on pressing the swelling.



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- Sometimes due to **continued chronic infection, opening of both the canaliculi into the sac** are blocked and a large fluctuant swelling is seen at the inner canthus with a negative regurgitation test.
- This is called ***encysted mucocele***.



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3. *Stage of chronic suppurative dacryocystitis.*

- Due to **pyogenic infections**, the mucoid discharge becomes purulent, converting the **mucocele into 'pyocoele'**.
- The condition is characterised by **epiphora**, associated **recurrent conjunctivitis** and **swelling at the inner canthus** with mild erythema of the overlying skin.
- On regurgitation a **frank purulent** discharge flows from the lower punctum.
- If openings of canaliculi are blocked at this stage the so called ***encysted pyocoele results.***



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4. *Stage of chronic fibrotic sac*

- Low grade repeated infections for a prolonged period ultimately result in a **small fibrotic sac** due to **thickening of mucosa**, which is often associated with persistent **epiphora and discharge**.
- Dacryocystography at this stage reveals a **very small sac with irregular folds in the mucosa**.



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Complications

- **Chronic intractable conjunctivitis, acute on chronic dacryocystitis.**
- **Ectropion of lower lid, eczema of lower lid skin due to prolonged watering.**
- **Simple corneal abrasions may become infected leading to hypopyon ulcer.**
- If an intraocular surgery is performed in the presence of dacryocystitis, there is high risk of developing **endophthalmitis**. Because of this, syringing of lacrimal sac is always done before attempting any intraocular surgery.



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Treatment

- **1. Conservative treatment by repeated *lacrima* syringing.** It may be useful in recent cases only.
- Longstanding cases blockage of NLD which usually **does not open** up with repeated lacrima syringing or even probing.



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- 2. Dacryocystorhinostomy (DCR).** *It should be the operation of choice as it re-establishes the lacrimal drainage.*
- 3. Dacryocystectomy (DCT).** *It should be performed only when DCR is contraindicated.*



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Indications of DCT

include:

- (i) Too young (less than 4 years) or too old (more than 60 years) patient.***
- (ii) Markedly shrunken and fibrosed sac.***
- (iii) Tuberculosis, syphilis, leprosy or mycotic infections of sac.***
- (iv) Tumours of sac.***