Lacrimal Disorders

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Tear film provides:

1. smooth and transparent **refractive surface**
2. essential **moisture**
3. **oxygen** to epithelial cells
4. **protective proteins** (e.g. IgA, complement, lysozyme)

Health of ocular surface is entirely dependent upon *quantity & quality of tear film* (both can be altered by contact lenses!).

* normal eye has 6 μL tears with turnover 1.2 μL/min.

Dacryostenosis

*- stricture of nasolacrimal duct.*

**Congenital dacryostenosis** - epiphora of one eye in infant (at age > 3 wk)

**Acquired dacryostenosis**:

1. chronic lacrimal sac infection
2. severe or chronic conjunctivitis.
3. deviated septum, hypertrophic rhinitis, mucosal polyps, hypertrophied inferior turbinate, fracture of facial bones.

Clinical Features

* prolonged blockage → dacryocystitis.
* pressure on lacrimal sac → copious mucus / pus reflux from punctum.

Treatment

**Congenital dacryostenosis** - **resolves spontaneously** by age 6 mo.

* ***milking lacrimal sac*** (with firm fingertip massage) + ***antibiotic ointment*** may speed resolution.
* if resolution is not spontaneous → ***punctum should be dilated*** (under brief general anesthesia) and ***lacrimal drainage system probed***.

**Acquired dacryostenosis** - dilate punctum under local anesthetic → **isotonic saline irrigation** through nasolacrimal system with fine blunt canaliculus needle (fluorescein drop in saline makes obstruction in nose easily detectable).

* if this technique fails → **lacrimal probing** with increasing size.
* complete obstruction → **surgical opening**.

Dacryocystitis

*- infection of lacrimal sac.*

* usually *secondary to dacryostenosis*.

**Acute dacryocystitis** - pain, redness, edema about lacrimal sac; epiphora; conjunctivitis; blepharitis; fever; leukocytosis; abscess may form → rupture → draining fistula.

* treatment - frequent **hot compresses**; cephalexin / cefazolin for *severe cases*; incision and drainage for *abscess*.



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**Chronic dacryocystitis** - slight sac swelling and tearing may be the only symptoms.

* pus may regurgitate (through punctum) when pressure is applied.
* retained secretions may form large mucocele.
* treatment - **nasolacrimal duct dilation** with probe and **syringing with saline**(under local anesthetic); contributory nasal or sinus abnormalities should be treated.

if this treatment fails → nasolacrimal intubation, dacryocystorhinostomy, sac removal.



Dacryoadenitis

* pain and swelling on temporal side of upper lid (upper lid appears S-shaped), ptosis:
* etiology:

**acute** – viruses (mumps, influenza, measles), gonococci.

**chronic** – tumors, sarcoid, tbc.





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