

07- DD: Watery eye

A. Lacrimation: Watering because of increased tear production

A- Increased production: **Lacrimation**: Excessive tears/ Hypersecretion of tears

- Lid conditions like ectropion
- Conjunctival like conjunctivitis cause lacrimation
- Cornea like corneal ulcer, foreign body cause lacrimation
- Neurogenic

Dry eye causing reflex watering

Drugs

Exposure to wind, cold, bright light cause watering or lacrimation

B. Epiphora: Watering because of obstruction to drainage

B- Decrease drainage: **Epiphora**: Obstruction of lacrimal system:

1. Punctal obstruction
 - Obstruction/stenosis by conjunctival scarring, cysts, tumours
 - Eversion by paralysis, scarring
2. Canaliculus obstruction: by trauma, infection, drugs, irradiation
3. Lacrimal sac obstruction
 - Acute dacryocystitis
 - Chronic dacryocystitis
4. Nasolacrimal duct obstruction
 - Congenital nasolacrimal duct obstruction:
 - Acquired nasolacrimal duct obstruction: Idiopathic is most common. Other causes include chronic inflammatory conditions, trauma and nasopharyngeal tumours
5. Nasal obstruction by swollen turbinate and other nasal pathologies

A- Lacrimation described in relevant sections

B- Epiphora described in chapter 7.1 of Modular lectures

History taking: watery eye

Chief complaint:

Important: watering with foreign body sensation, discomfort and redness point out towards lacrimation. Watering with tears overflowing on cheeks and watering exacerbated by cold and wind points out towards epiphora

History of present illness:

Age of patient:

Watering in new born is usually **epiphora** because of congenital lacrimal duct obstruction.

Watering in adults is usually **lacrimation** because of conjunctivitis.

Watering at old age is usually **epiphora** because of acquired nasolacrimal duct obstruction or ectropion

One eye or both eyes:

Watering in one eye followed by other eye is usually conjunctivitis

Onset: Gradual or sudden / Duration

Sudden onset of watering is usually associated with lacrimation while long history hints towards epiphora

Associated symptoms:

watering with foreign body sensation, discomfort and redness points out towards lacrimation.

Watering with tears overflowing on cheeks and watering exacerbated by cold and wind points out towards epiphora

Trauma / injury:

History of penetrating trauma is important as it may indicate damage to lacrimal drainage system.

Past ocular history:

Operations for watering in past may hint towards recurrence.

General systemic history:

Certain systemic diseases are particularly associated with eye diseases. History of severity and duration of diabetes and hypertension are of prime importance.

Family history:

Diseases causing lacrimation or epiphora are usually not inherited.

Examination:

Vision: It should be checked as routine.

General examination: Examine lids for conditions like ectropion and entropion.

Slit lamp examination: Punctum need to be examined in particular for blockage or eversion.

Conjunctiva and cornea should be examined in particular for causes of lacrimation.

Fundus examination: It should be done as routine

Intra ocular pressure: It should be checked as routine

OPD cases & possible MCQs

Q1- A three-month infant is brought to outpatients with complaint of right watery eye since birth. Eye gets sticky in morning for last few days. On examination there is no redness and eye is full of tears. What could be diagnosis?

Explanation & answer: No local signs point towards **epiphora**. Lacrimal duct sometimes can not be recanalized in some newborns so congenital nasolacrimal duct is the answer.

Q2- A young man attended OPD with complaints of watery eye along with redness and foreign body sensation. On examination there is bilateral conjunctival congestion along with yellowish white discharge. What is your diagnosis?

Explanation & answer: Redness, foreign body sensation and conjunctival congestion are suggestive of **lacrimation** and cause is conjunctivitis which is described in red eye section.

Q3- A manual worker is complaining of watery eye which started during work. He is also complaining of feeling something in eye. On examination there is mild conjunctival congestion with black spot of cornea. What is diagnosis?

Explanation & answer: History, feeling something in eye, congestion and black spot on cornea are suggestive of local cause **lacrimation** as cause. Cause is corneal described which is described in red eye section.

Q4- A 49-year lady is complaining of gritty eyes for last few months. Her symptoms have got worse now in winter. On examination there are normal anterior segments with clear corneas. Tear film breakup time is less than normal. What is your diagnosis?

Explanation & answer: Females around age 50 have hormonal changes which cause dry eye. Symptoms getting worse in winter or summer are also suggestive of dry eye. Decrease in tear film breakup is seen in dry eye and confirm **lacrimation** because of dry eye.

It must be remembered that in dry eye there is neurogenic reflex causing lacrimation.

Q5- A 49-year lady is complaining of gritty eyes for last few months. Her symptoms have got worse now in summer and now she can hardly open eyes. On examination there is punctate staining of cornea with fluorescein. What is your diagnosis?

Explanation & answer: Age and symptom getting worse in summer are again suggestive of dry eye. Punctate staining of cornea is suggestive of severe dry eye because of which patient can not open eyes so it is **lacrimation**.

Q6- A 71-year man is complaining of watery eyes for last one year with no associated symptoms. On examination lower lids are everted with puncta away from eye balls. What is your diagnosis?

Explanation & answer: Everted lower lid is lower lid ectropion described in abnormalities of lid, lash and orbit section. Ectropion caused obstruction in tear flow so it is **epiphora**.

Q7- A young man had road accident with laceration on medial side of eye which was repaired. Since then, he is complaining of watery eye. On examination there is scar near medial canthus with normal anterior segments. What is your diagnosis?

Explanation & answer: History points out towards trauma which results in scarring. Trauma on medial side of eye is likely to damage canaliculi. So this is **epiphora** because of damage to **canaliculi**.

Q8- A 67-year lady is complaining of right watery eye which is getting worse over last few months. She says that she has to wipe tears on cheek every few minutes. There are no other symptoms. On examination normal looking eyes. On sac wash out no fluid in throat. What is your diagnosis?

Explanation & answer: Old age is known for acquired nasolacrimal duct obstruction. Tear on cheeks means **epiphora**. (**Sac wash** is a test which confirm patency or blockage of nasolacrimal duct. On sac wash if water comes in throat mean nasolacrimal duct is open but if water does not come in throat means nasolacrimal duct is blocked). In this patient no fluid in throat on sac wash which confirms **acquired nasolacrimal duct obstruction**.

Q9- A 67-year lady is complaining of right watery eye which is getting worse over last few months. She says that she has to wipe tears on cheek every few minutes. Now for last two days there is painful swelling on medial canthus. On examination there is tender swelling on medial canthus with redness of skin over it. What is your diagnosis?

Explanation & answer: Old age is known for acquired nasolacrimal duct obstruction. Tear on cheeks means **epiphora**. Swelling near medial canthus which is painful and tender means infection in lacrimal sac so this patient has **acute dacryocystitis**.