



Gaza Ophthalmic Centre

## 1.2 The Eye Lids

(Part 2)

Ophthalmology

4<sup>TH</sup> YEAR MEDICAL STUDENTS

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2021

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.Good morning. This is part two of the diseases of the eyelids for medical students

### 3) *Deformities of lid margin & lash position*

1. Rubbing Eye Lashes
2. Trichiasis
3. Entropion
4. Ectropion

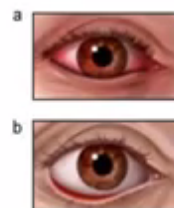
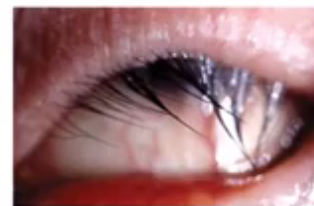


Figure 1

a Entropion – eyelid turned in

b Ectropion – eyelid turned out

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Today, we are going to talk about the deformities of the left margin and the abnormal lash positions. There are four categories rubbing eyelashes trichiasis, entropion and ectropion

### 3.1 Rubbing Eye Lashes

#### ▣ Definition:

- 4 lashes or less
- Mal-directed &
- Rub against
  - Cornea &
  - Bulbar conjunctiva

#### ▣ Clinical Picture:

1. F.B sensation
2. Lacrimation
3. Conj. Hyperemia



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Rubbing eyelashes is defined by the presence of less than four lashes which are mild directed and rubbing against the cornea and the bulbar conjunctiva the patient will complaint from foreign body sensation lacrimation and there will be conjunctiva redness or

Hyperemia

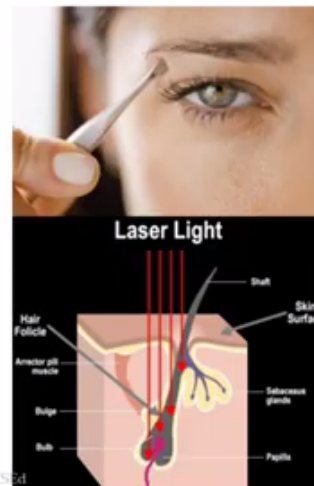
### 3.1 Rubbing Eye Lashes

#### • Epilation:

- Used as a temporary measure

#### • Laser photocoagulation :

- Using Argon laser



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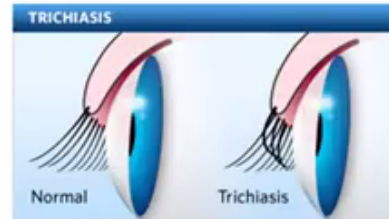
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the treatment is by simple a epilation as a temporary measure or laser photocoagulation to the bulb of the eyelashes may be needed in recurrent case

## 3.2 Trichiasis

- **Definition:**

- More than 4 lashes
- Are mal directed
- & rub against
  - Cornea or
  - Bulbar conj



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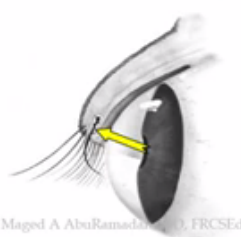
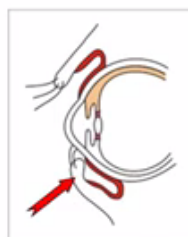
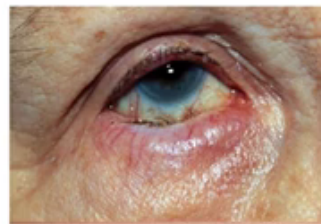
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trichiasis is the case when more than four lashes are mal directed and rubbing against the cornea or the bulbar conjunctiva

## 3.2 Trichiasis

- **Etiology:**

1. 2ry to Entropion
2. Pure Trichiasis :
  1. Congenital (Distichiasis)
  2. Acquired



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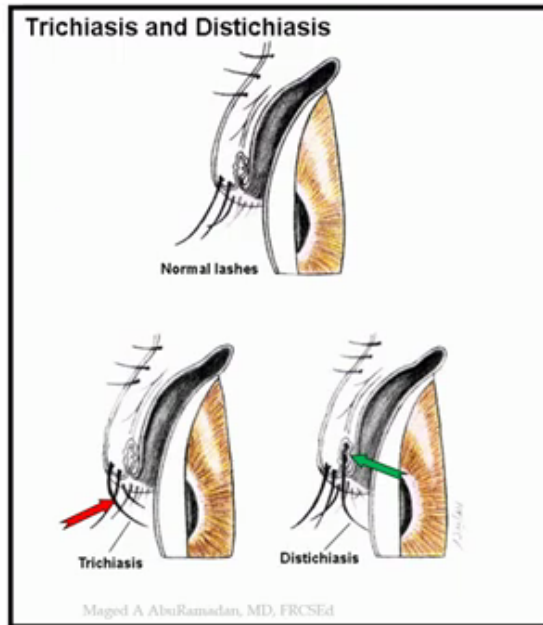
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is may be secondary to entropion with the normal position of the eyelashes however, the eyelid itself is rolled inside or it can be the eyelashes itself have abnormal position. In .distichiasis it is congenital or it can be acquired

## 3.2 Trichiasis

•



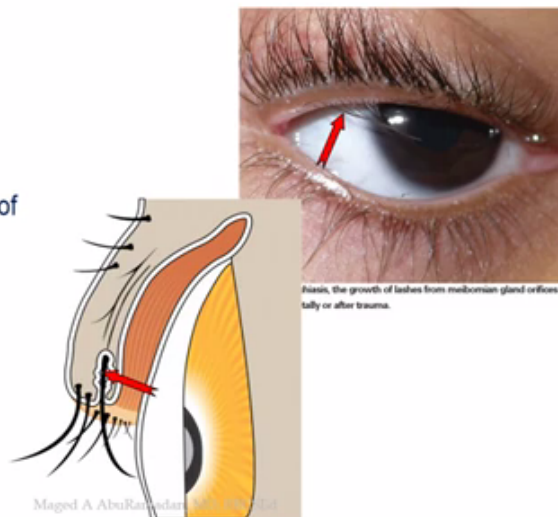
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In this picture we see the normal position of the lashes and the upper part. However on the bottom left we see that the eyelashes are mal directed posterior and this what we call trichiasis. However, in the congenital form, we found that the eyelashes arise from the .meibomian gland rather than from the anterior part of the eyelid.

## 3.2 Trichiasis

- Congenital Distichiasis:
  - Rare
  - Extra row of lashes
  - In the position of openings of
  - Meibomian glands



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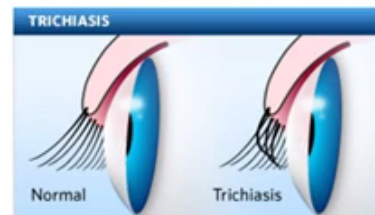
Congenital distichiasis is rare. And there will be an extra row of lashes instead of the meibomian row gland and it's in the position of the opening of these meibomian gland.

## 3.2 Trichiasis

### ▣ **Acquired:**

- Due to fibrosis
  - Distorting the
  - Hair follicles

- 1- Trachoma
- 2- Ulcerative Blepharitis
- 3- Burns
- 4- Post operative
- 5- Chemicals
- 6- Diphtheria
- 7- Pemphigoid



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acquired trichiasis are due to fibrosis distorting the direction of the hair follicle that results in cases of severe inflammation and chronic ones like in Trachoma, ulcerative blepharitis, burns, post operative chemicals, diphtheria and pemphigoid

## 3.2 Trichiasis

### • **Clinical Picture:**

#### • Symptoms:

1. F.B sensation
2. Lacrimation
3. Photophobia
4. Pain

#### • Signs:

1. Misdirected lashes > 4
2. Conjunctival injection
3. Discharge



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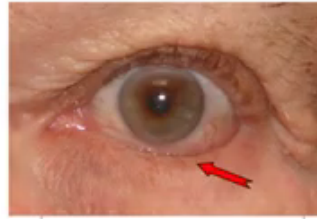
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Clinically the patient will complain from foreign body sensation leading to lacrimation photophobia and pain in the eye. On examination we find multiple mal directed lashes with conjunctival injection and sometimes there is a discharge

### 3.3 Entropion

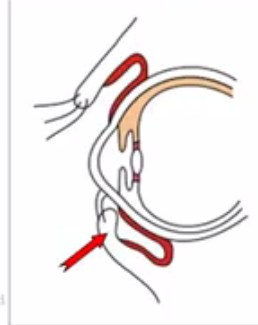
- **Definition:**

- Rolling in of the
- Lid margin
- Towards the eye



- **Etiology:**

1. Cicatricial
2. Spastic
3. Congenital



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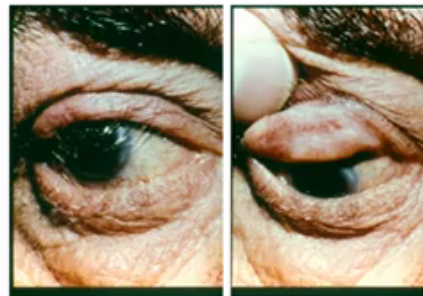
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entropion is the rolling in of the lid margin towards the eye. It can be cicatricial spastic or congenital

### 3.3 Entropion

1. Cicatricial:

- Due to fibrosis of
- Palpebral conjunctiva
- As in
  - Trachoma (+++) ..
  - Burn & caustics



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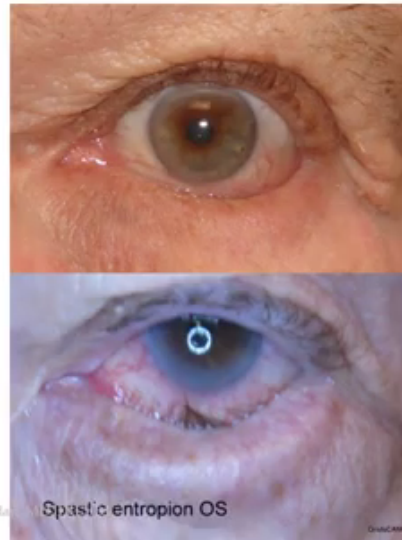
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cicatricial entropion. It is due to severe fibrosis of the palpebral conjunctiva. Here we can see on the right when we evert the upper eyelid you can see severe fibrosis on the tarsal conjunctiva of the upper eyelid. This is a case following trachoma which is the most common however, burns and caustics can also lead to the same cicatricial entropion

### 3.3 Entropion

#### 2. Spastic

- Spasm of muscles of Riolan
- Lack of support of lid by the globe
  - as in sunken eyes
  - (senile Enophthalmos)
- Atrophic eyes
  - (Enucleated eyes)
- Bandage
  - After ocular surgery



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Spastic entropion OS

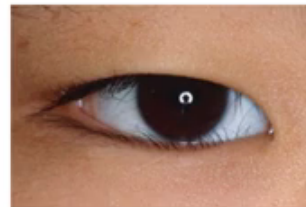
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in spastic entropion usually noticed in elderly and it is due to spasm of the muscle of riolan part of the orbicularis oculi muscles supplied by the facial nerve, and it's due to lack of the support of the eyelid by the globe as in sunken eyes, and we call it senile enophthalmos ,atrophic eyes with inoculated eyes or strong bandage after ocular surgery may also lead to .the same situation

### 3.3 Entropion

#### 3. Congenital:

- Usually associated with:
  - Microphthalmos
  - Anophthalmos



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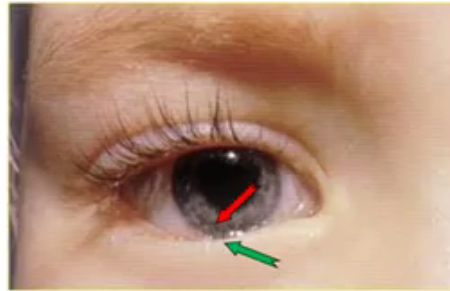
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Congenital interruption is usually associated with much severe disease like microphthalmos .or even anophthelmos

### 3.3 Entropion

- **Clinical Picture:**

- Symptoms:
  1. F.B sensation
  2. Lacrimation
  3. Photophobia
  4. Pain
- Signs:
  - Inward directed lid margin + lashes
  - Conjunctival injection
  - Discharge

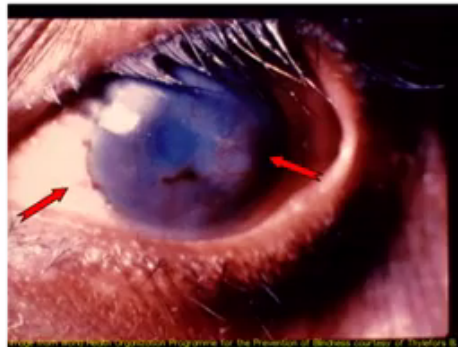


Clinically the patient will complain once again from foreign body sensation, lacrimation, photophobia, and pain, and this is due to the eyelashes rubbing against the conjunctiva and cornea. However, we can see that the lid margin itself is directed inward and carrying the lashes with itself. In addition to discharge and conjunctival injection.

### 3.3 Entropion

- **Complications:**

- Conjunctiva :
  1. Chronic conjunctivitis
  2. Mechanical irritation
  3. Conj ulceration
- Cornea
  1. Corneal ulceration
  2. Vascularization
  3. Opacification

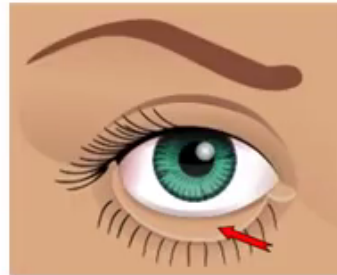
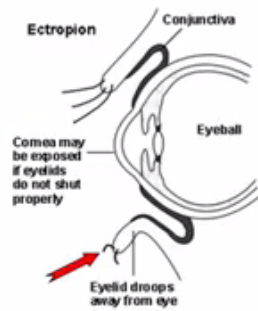


Entropion can be complicated in chronic cases by chronic conjunctivitis, mechanical irritation, and conjunctival ulcer, also the cornea can have an ulcer, neovessels, or opacity.

### 3.4 Ectropion

- **Definition**

- Rolling out
- Of the lid margin



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ectropion is quite the opposite it is rolling out of the eyelid margin

### 3.4 Ectropion

- **Etiology:**

1. Senile
2. Mechanical
3. Paralytic
4. Spastic
5. Cicatricial

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.Dropping can be senile due to mechanical, paralytic spastic or cicatricial cases .

### 3.4 Ectropion

#### 1- Senile :

- Due to laxity of
  - Orbicularis Ms &
  - Palpebral ligament
- Redundant skin



senile ectropion is due to the laxity of the orbicularis muscle and the palpebral ligament and there will be also a redundant skin

### 3.4 Ectropion

#### 2- Mechanical:

- due to increased weight
- of lower lid
- by
  - Chalazion
  - Tumor



mechanical ectropion results from the any lesion with increased weight on the lower eyelid with a chalazion or tumor as we can see in this case

### 3.4 Ectropion

#### 3- Paralytic :

- due to paralysis
- of orbicularis ms
- ( 7<sup>th</sup> n. palsy)

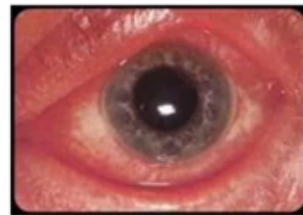


paralytic is due to paralysis of the orbicularis muscle as we can see in facial palsy ,

### 3.4 Ectropion

#### 4- Spastic

- Due to :
  1. Spasm of ms. Riolan
  2. Well support of lid by globe
    - as children
    - exophthalmos



spastic ectropion is due to spasms of the outer part of the muscle of Riolan and the support of the lid by the globe as it children or in exophthalmos is more than normal

### 3.4 Ectropion

#### 5- Cicatricial:

- due to scarring of lid skin
- as in
  - burns
  - operation



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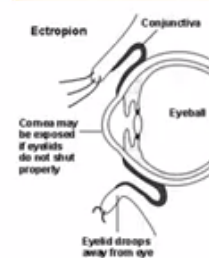
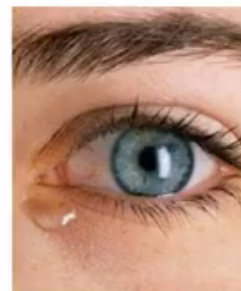
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cicatricial ectropion on the other hand is due to scarring of the eyelid skin, as we can see in .burns or in post operative or injury

### 3.4 Ectropion

#### • Clinical Picture:

- Symptoms:
  1. Epiphora
  2. Burning sensation
    - due to exposure
    - ( in paralytic cases)
  3. Drop of vision
    - (corneal ulceration)



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clinically the patient will complain mainly from a epiphora which is means that the tear film groups over the eyelid margin, there will be also burning sensation due to exposure of the cornea and the conjunctiva especially in cases of paralytic disease, and that may lead to .corneal ulcer with drop of visual acuity

### 3.4 Ectropion

- **Clinical Picture:**

- Mild :
  - the punctum is visible
- Moderate :
  - Tarsal ( palpebral) conj. is
    - exposed &
    - hyperaemic
- Severe
  - the palp conj is
    - exposed &
    - thickened &
    - the cornea may ulcerate



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In mild cases of ectropion we can see the punctum everted on the medial aspect of the eyelid. However, in moderate cases, you can also see the exposed palpebral conjunctiva which is hyperemic. And in very severe cases, we can see thickening of the exposed conjunctiva and also you can find a corneal ulcer

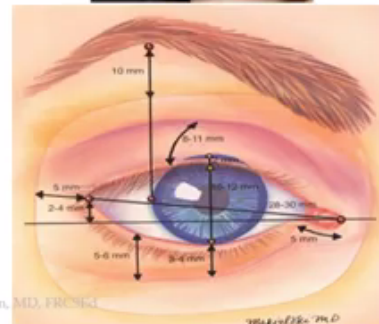
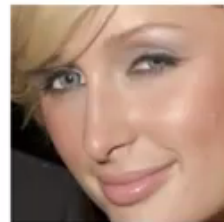
### 4) Ptosis

- **Definition :**

- Drooping
- of the
- Upper Eyelid

- Normally:

- UL
  - Covers
  - upper 2mm of cornea
- LL
  - Just touches the limbus



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ptosis is the dropping down of the upper eyelid and normally the upper eyelid covers the upper two millimeters of the cornea while the lower lead just touches the limbus

## 4) Ptosis

- Aetiology

1. Congenital
2. Acquired
3. Pseudo ptosis



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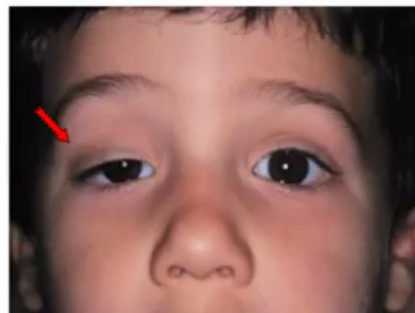
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ptosis this can be congenital or acquired and there are cases of pseudo ptosis due to raised. out of the opposite eyelid

## 4) Ptosis

### 1. Congenital:

- More common
- Dates since birth
- Usually Bilateral
  - May be asymmetrical



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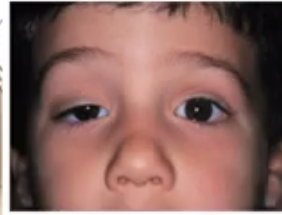
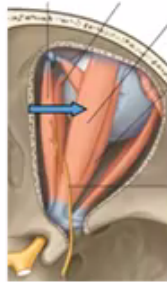
congenital ptosis is more common and they dates since birth and usually it is bilateral although it might be asymmetric

## 4) Ptosis

- **Congenital:**

- **Cause**

- Faulty development
    - of L.P.S
    - or its nerve supply



congenital ptosis is usually due to faulty development of the levator palpebrae superioris or its nerve supply the third nerve

## 4) Ptosis

- **Congenital:**

- **Associated with**

- Other congenital anomalies
      - Epicanthus
    - Marcus Gunn phenomenon



it might be associated with other congenital anomalies like in Epicanthus or we can see what we call markers gun fit macus gunn phenomena

## 4) Ptosis

- **Congenital:**

- Marcus Gunn phenomenon
  - ( jaw – winking)
    - The ptosed lid elevates
    - on moving the jaw
- Cause:
  - faulty innervation
  - Levator m supplied by
  - 5<sup>th</sup> CrN
  - Instead of
  - 3rd nerve
  - ( misdirection)



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marcus gunn phenomena or jaw winking is that the ptosed lid elevates when we move the jaw ,this is due to faulty innervation. So the levator muscle is supplied by the fifth cranial nerve instead of the third nerve. So this is Misdirection. So when you move the jaw as in .mastication then you see the upper eyelid goes up and down with each movement

## 4) Ptosis

- 2. **Acquired:**

- Less common
- Any age
- Usually unilateral

Ptosis (drooping of the eyelid)



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Acquire ptosis This is much less common it can be affect any age and usually unilateral

## 4) Ptosis

- **Acquired:**

- **Causes:**

1. Paralytic
  1. 3rd n. palsy
  2. Horner syndrome
2. Traumatic
3. Mechanical
4. Hysterical
5. Myogenic

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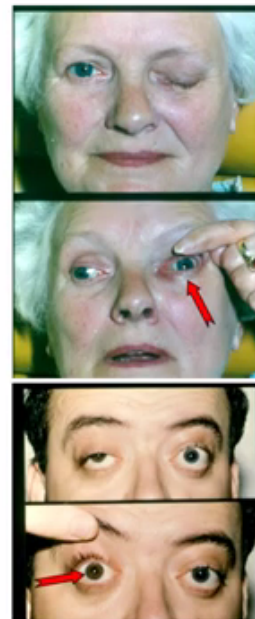
most common this is a paralytic due to third nerve palsy or in horner syndrome. Also trauma mechanical causes hysterical or myogenic causes can attribute acquired ptosis

## 4) Ptosis

- **Acquired:**

- 1- Paralytic

- due to paralysis
- or paresis
- of levator ms
- or its nerve supply
- 3rd n. palsy
  - Eye Divergent
  - ? Wide pupil
- Horner syndrome
  - Eye straight
  - Narrow pupil (Miosis)



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the paralytic is due to paralysis or Paresis of the levator palpebrae superioris muscle or cut of its nerve supply the third nerve palsy the eye is divergent with the pupil widely dilated. However in Horner syndrome. The ptosis is less apparent with the eyes are straight with the pupils miosis

## 4) Ptosis

- **Acquired:**

- 2- Myogenic

- Myasthenia Gravis
    - Myotonic Dystrophy



myogenic ptosis can be seen in myasthenia gravis, which means the ptosis is most evident later in the day rather in the morning and also can be seen in myotonic dystrophy

## 4) Ptosis

- **Clinical Picture:**

- **Symptoms:**

1. Bad cosmetic appearance
2. Interference with vision
  - ( if covers pupil)

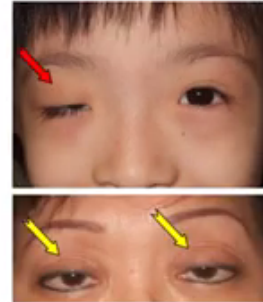


Clinically usually the patient complains due to the bad cosmetic appearance of the eye or if the ptosis is severe enough to cover the pupil and interfere with vision

## 4) Ptosis

- Signs:

1. Ptosis may be
  1. Unilat.
  2. or Bilateral
2. Drooping of upper lid



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On examination the ptosis might be unilateral or bilateral drooping of the upper lid .

## 4) Ptosis

- Signs:

- Associated cong anomalies
  - e.g epicanthus
- In severe cases
  - compensatory changes occur



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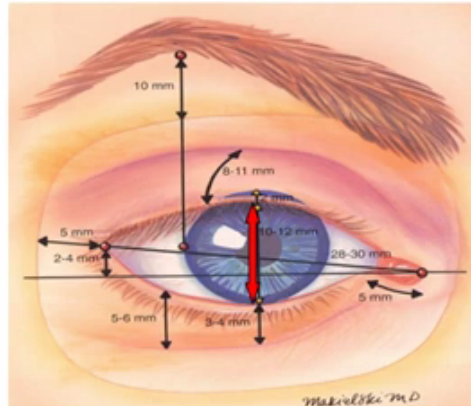
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sign associated congenital anomalies like epicanthus, and in severe cases, you can see compensatory changes like elevation and (?). 10:49:40

## 4) Ptosis

- **Important Clinical points:**

- Ptosis may be
  - Mild
    - drooping = 1-2 mm
  - Moderate
    - L drooping = 3mm
  - Severe
    - drooping > 4 mm



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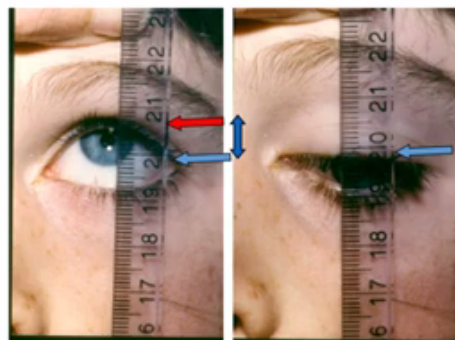
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Clinically, we regard ptosis as mild if the drooping is between one or two millimeters it is ,severe if more than four millimeters and moderate between two to four

## 4) Ptosis

- **Important Clinical points:**

- **Determine the levator function (power)**
- Ask :
  - the patient to look down
- Ask:
  - the patient to look up
- Measure:
  - the elevation of
  - the lid margin
  - ( in mm)



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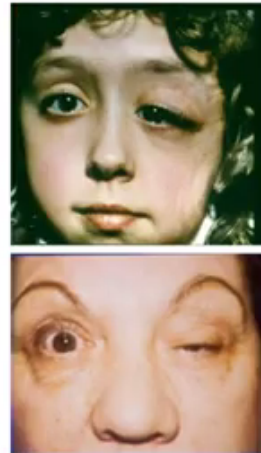
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we can usually determine the amount of the levator palpebrae superioris function or its power by asking the patient to look down and then to look up and then we measure the .journey between the most lower to the most upper position of the eyelid in millimeters

## 4) Ptosis

- **Treatment :**
- Acquired
  - ttt of the cause



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treatment of acquired causes is that treatment of the cause

## 4) Ptosis

- **Treatment:**
- **Congenital:**
  - Age of interference:
    - Mild to moderate:
      - at school age (**5-6-ys**)
      - to allow for normal ms. Development
    - Severe
      - Unilateral
        - at the age of **2 ys**
        - ( for fear of amblyopia)
      - Bilateral
        - at **younger Age**
        - ( even at months)



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If it is congenital, it depends on the age of the patient when he presents to us and also on . the severity. If it is mild to moderate, then and the pupil is not covered then we can wait till just pre school age five to six years to allow for normal muscular development. However, if this severe especially uni lateral, then we can have to do with at the age of three years for fear of developing amblyopia, in bibilateral cases. Even we need to interfere much earlier at ..the age of few months old

## 5) Lagophthalmos

- **Definition:**

- Inability
- to close
- Palpebral Fissure
- completely



lagophthalmos is quite the opposite of ptosis. It is the inability to close the palpebral fissure completely when the eyes are shut down

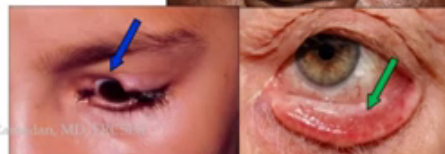
## 5) Lagophthalmos

- **Etiology:**

- 1) Local causes:

- 1.1) Lids:

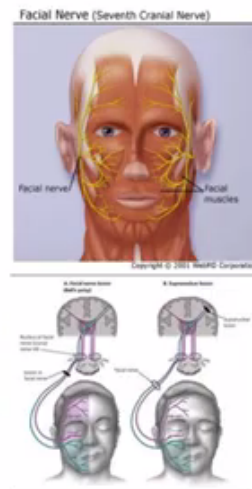
1. Paralysis of orbicularis
  - (as in Bell's palsy)
2. Physiological :
  - during sleep
3. Severe Ectropion
  - (esp. cicatricial)
4. Coloboma of the lid



Usually it's due to a local cause like paralysis of the orbicularis as in seventh, cranial nerve palsy or Bell's Palsy. During sleep, you might sleep with slightly opened eyes if there is severe ectropion, especially the cicritical type. And if there is a coloboma with or congenital or due to trauma and injury

## 5) Lagophthalmos

- Local causes:
  - Lids:
    - Paralysis of orbicularis
    - (as in Bell's palsy)



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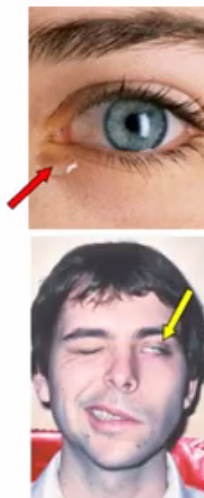
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paralysis of the orbicularis he can see that there are other signs of facial palsy for example, , this is a part of the lower motor palsy

## 5) Lagophthalmos

- **Clinical Picture:**
  - Symptoms
    - Epiphora,
    - Burning sensation (exposure)
  - Signs:
    - Inability to close the P.F.
    - when the lids are shut



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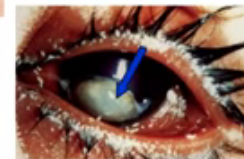
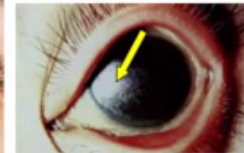
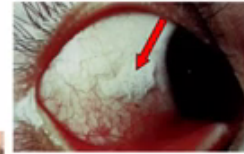
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clinically there will be a epiphora and there is the burning sensation secondary to exposure. .On examination the patient is unable to close the palpebral fissure totally

## 5) Lagophthalmos

- **Complications:**

1. Conjunctiva
  1. Xerosis,
  2. Chronic conjunctivitis
2. Cornea
  1. xerosis,
  2. keratitis with Lagophthalmos:
    1. lower 1/3 of cornea
    2. Bells phenomenon protects upper 2/3
3. Epiphora
4. Infection
5. Disfigurement



Complications can affect the conjunctiva or the cornea conjunctiva due to the dryness there is xerosis and chronic conjunctivitis, the cornea also xerosis or dryness, keratitis and that usually involves the lower 1/3 of the cornea because bells phenomena the rotation of the eye up protects the upper to third and the lower third is always exposed. There is also epiphora, infection and disfigurement

## 5) Lagophthalmos

- **Treatment:**

1. *ttt of the cause*
2. *Temporary measures*
3. *Permanent measures*

the treatment is usually of the cause and there are either temporary or permanent .measures

## 5) Lagophthalmos

- **Treatment:**
  - **Temporary measures:**
    - protection of the cornea
    - from dryness
    - ( during sleep)
  - **BY**
    - **Early / mild cases**
    - Lubricant
      - Ointment at night & methyl cellulose drop ( day)
      - Eye patch
      - Soft lenses!!!



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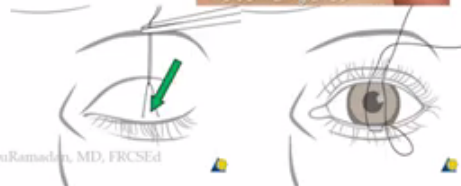
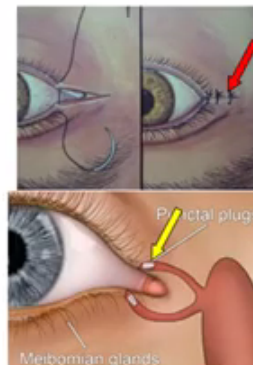
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temporary measures is like protection of the cornea from dryness during sleep by lubricant ointment or drops and eye patching or soft lenses with care in some selected case

## 5) Lagophthalmos

- **Treatment:**
  - **Temporary measures:**
    - **Late / severe**
  - Lat tarsorrhaphy
    - ( in mild cases)
  - Punctual occlusion
    - ( plugs)
  - Median tarsorrhaphy
    - ( in severe cases)



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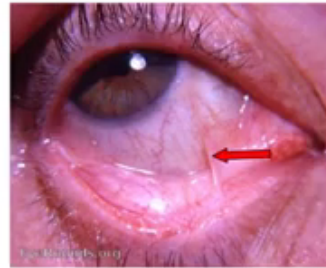
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If the case is severe, we can do lateral tarsorrhaphy or punctal occlusion with plugs and median tarsorrhaphy in the very severe cases

## 6) Symblepharon

- **Definition:**

- **Adhesion**
- **between**
  1. **lid and**
  2. **Globe**
    1. **Conjunctiva**
    2. **& Cornea)**



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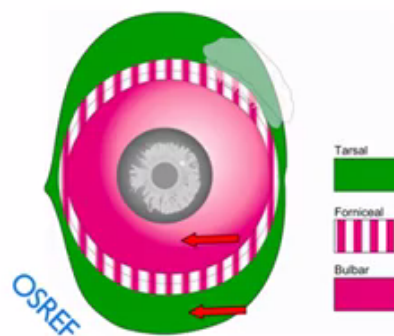
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Symblepharon is an adhesion between the eyelids and the globe whether the conjunctiva, the cornea or both.

## 6) Symblepharon

- **Etiology:**

1. **Burns & caustics**
2. **Post operative pterygium op**
3. **Post Trachoma**
4. **OCP**
5. **SJS**



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Here on this figure we can see the pink is the bulbar conjunctiva, the green is the palpebral or tarsal conjunctiva, and the stripe is the upper and lower fornices. Symblepharon is fibrosis and adhesion between the conjunctiva and the globe or the cornea. It can happen after burns and caustic burns, it can be after post-operative surgery like pterygium excision, post trachoma, Ocular cicatricial pemphigoid, and Steven Johnson Syndrome.

Thank you