

Ophthalmology General Understanding

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INTRODUCTION

Ophthalmology is a branch of medicine and surgery that deals with the diagnosis and treatment of disorders of the eye. An ophthalmologist is a physician who specializes in ophthalmology. The credentials include a degree in medicine, followed by additional four to five years of residency training in ophthalmology. Residency training programs for ophthalmology may require a one-year internship with training in internal medicine, paediatrics, or general surgery. Additional specialty training (or fellowship) may be sought in a particular aspect of eye pathology. Ophthalmologists are allowed to prescribe medications to treat eye diseases, implement laser therapy, and perform surgery when needed. Ophthalmologists may participate in academic research on the diagnosis and treatment for eye disorders.

A partial list of the most common diseases treated by ophthalmologists include Cataract, Excessive tearing (tear duct obstruction), Proposes (bulged eyes)

A cataract is a cloudy area in the lens of the eye that leads to a decrease in vision. Cataracts often develop slowly and can affect one or both eyes. Symptoms may include faded colors, blurry or double vision, halos around light, trouble with bright lights, and trouble seeing at night. This may result in trouble driving, reading, or recognizing faces. Poor vision caused by cataracts may also result in an increased risk of falling and depression. Cataracts cause half of all cases of Cataracts are most commonly due to aging but may also occur due to trauma or radiation exposure, be present from birth, or occur following eye surgery for other problems. Risk factors include diabetes, longstanding use of corticosteroid medication, smoking tobacco, prolonged exposure to sunlight, and alcohol. The underlying mechanism involves accumulation of clumps of protein or yellow-brown pigment in the lens that reduces transmission of light to the retina at the back of the eye. Diagnosis is by an eye examination.

METHOD

Prevention includes wearing sunglasses, a wide brimmed hat, eating leafy vegetables and fruits, and avoiding smoking. Early on the symptoms may be improved with glasses. If this does not help, surgery to remove the cloudy lens and replace it with an artificial lens is the only effective treatment. Cataract surgery is not readily available in many countries, and surgery is needed only if the cataracts are causing problems and generally results in an improved quality of life. Epiphora is an overflow of tears onto the face, other than caused by normal crying. It is a clinical sign or condition that constitutes insufficient tear film drainage from the eyes, in those tears will drain down the face rather than through the nasolacrimal system.

Causes of epiphora are any that cause either overproduction of tears or decreased drainage of tears, resulting in tearing onto the cheek. This can be due to ocular irritation and inflammation (including trichiasis and entropies) or an obstructed tear outflow tract which is divided according to its anatomical location (i.e. ectropionise,

punctual, canalicular or nasolacrimal duct obstruction). The latter is often due to aging (a spontaneous process), conjunctivochalasis, infection (i.e. dacryocystitis), rhinitis, and in neonates or infants, failure of the nasolacrimal duct to open. Another cause could be poor reconstruction of the nasolacrimal duct system after trauma to the area. Cause of trauma could be facial fractures (including nasoethmoid fractures or maxillary Le Fort fractures), and soft tissue trauma involving the nose and/or the eyelid. This condition is often frustrating or irritating. A systematic review studying the usage of punctual for treatment of **dry eye** reported a few cases of epiphora among participants.

Diagnosis of epiphora is clinical by history presentation and observation of the lids. Fluorescein dye can be used to examine for punctual reflux by pressing on the canaliculated in which the clinician should note resistance of reflux as it irrigates through the uncut into the nose. Dacryoscintigraphy is an imaging method used to detect obstructions in the lacrimal apparatus.

If epiphora is caused by ectropionise or entropies, lid repair is indicated. Punctual irrigation is also required. In infants with nasolacrimal defects, a nasolacrimal duct probe is used and a tube replacement, either temporary (Crawford) or permanent (Jones), is carried out. A surgical procedure called a dacryocystorhinostomy is done to join the lacrimal sac to the nasal mucosa in order to restore lacrimal drainage.

Exophthalmos (also called exophthalmos, exophthalmia, proptosis, or exorcisms) is a bulging of the eye anteriorly out of the orbit. Exophthalmos can be either bilateral (as is often seen in **Graves' disease**) or unilateral (as is often seen in an orbital tumour). Complete or partial dislocation from the orbit is also possible from trauma or swelling of surrounding tissue resulting from trauma.

CONCLUSION

In the case of Graves' disease, the displacement of the eye results from abnormal connective tissue deposition in the orbit and **extra ocular muscles**, which can be visualized by **CT** or **MRI**.

If left untreated, exophthalmos can cause the eyelids to fail to close during sleep, leading to **corneal** dryness and damage. Another possible complication is a form of redness or irritation called **superior limbic keratoconjunctivitis**, in which the area above the cornea becomes inflamed as a result of increased friction when blinking. The process that is causing the displacement of the eye may also compress the **optic nerve** or **ophthalmic artery**, lead to **blindness**.

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