

Ophthalmology Department

Facial Nerve Paralysis

What is a facial nerve?

Facial nerve is the 7th of 12 cranial nerves. It emerges from the brain stem and goes through a complex route to reach the muscles of facial expression including keeping the eyebrows high and closure of the eyelids.

What are the causes of facial nerve paralysis?

Facial nerve paralysis may be congenital or acquired. Acquired causes include: Infection (Bell's palsy), vascular lesions, tumours (acoustic neuroma, parotid gland or temporal bone tumour) or trauma (birth, temporal bone fracture).

What are the symptoms?

The paralysis usually affects one half of the face. Patients with facial nerve paralysis develop flattening of the affected half of the face with loss of forehead wrinkles, inability to whistle and dragged appearance of the opposite corner of the mouth. Eye symptoms include:

- Eyebrow drooping, elevation or retraction of the upper eyelid
- Sagging and ectropion (outward turning of the lid margin) of the lower eyelid
- Watering, lagophthalmos (inability to close the eye)
- Exposure keratopathy (drying of the cornea).

How is this condition managed?

Many patients can be managed medically with lubricating eye drops and ointment using artificial tear preparations and taping the eyelids closed at bedtime.



When is a surgical procedure required?

Surgical procedures may be advised for facial nerve paralysis based on each individual case. The primary aim of treatment is to protect the cornea (coloured part of the eye) since it may undergo drying due to poor lid closure and thus affect the eye sight. The other reason for a surgical procedure is to reduce the eye watering.

Various surgical procedures:

Botulinum Toxin Injection – This is an injection of Botulinum toxin into the eyelid to induce temporary drooping of the upper eyelid in cases where the patient is unable to close their eyes properly.

Lateral Tarsorrhaphy – Surgical closure of the outer portion of the eyelids will frequently suffice to narrow the eyelid opening and decrease evaporation. Due to its poor cosmetic result, it is often reserved for extreme situations only.

Lateral Tarsal Strip Procedure - This procedure involves tightening of the lower eyelid and is performed when the eyelid is lax and sagging. The eyelid is shortened and reattached to the bony outer orbital rim.

Medial Canthoplasty – This procedure may be required to pull up the sagging lower lid especially in the inner corner.

Gold Weights - Better closure of the eyelids can be obtained with placement of a gold weight in the upper lid. This may be done externally or fixed inside the upper lid by a surgical procedure. The weight acts by gravity to help close the eyelids in the relaxed state. This procedure is only useful in certain cases.

Brow ptosis correction - There are several different procedures to correct the position of the drooping eyebrow. Some are done directly over the eyebrow while others may be carried out via the forehead or the scalp. This is often necessary for cosmetic reasons while in some situations it is necessary to improve the field of vision.

Are there any risks or side effects?

- There may be bruising around the eye

Patient Information

- There is a small risk of infection of the lid or eye
- There is a possibility of recurrence or under correction of the eyelid, which may require further surgery
- You may end up with a scar

Special Problems

Neurotrophic Keratitis - this can accompany facial paralysis when surgery is performed for head and neck lesions. Patients have diminished sensation of the cornea (coloured part of the eye) and cannot feel dryness or foreign bodies which can rub on the corneal surface. In this situation there is a greater incidence of corneal ulceration.

Crocodile Tears – this is a rare symptom of facial nerve paralysis. This happens due to abnormal connections between the tear production mechanism and chewing muscles, during the recovery phase of the facial nerve paralysis. As a result, one may experience copious and embarrassing watering of the eye while eating. This can be successfully managed using repeated injections of the Botulinum toxin.

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