



Changes in the eyelids in Facial Palsy

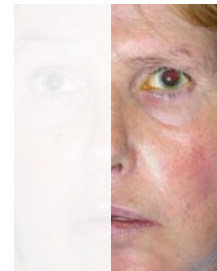
For a healthy, moist, comfortable eye, several muscles and the different nerves controlling these muscles, must function normally.

Firstly, a nerve called the facial nerve controls muscles of the face and eyelids. These muscles lift the eyebrow and help close the eyelids, protecting the front of the eye. With a facial palsy, the facial nerve for some reason stops working. Consequently, there is reduced or absent movement of these muscles. The facial nerve supplies a circle of muscle around the eyelids which closes the eyelids over the front of the eye to protect it and to keep it lubricated with the natural tears. In facial nerve palsy, the eyelids are unable to close or are only able to partially close (lagophthalmos). In the upper eyelid there may also be unrivalled action of the levator muscle that is responsible for lifting the upper eyelid. This can result in the upper eyelid being too high (upper eyelid retraction) so that more of the front of the eye is open and exposed. In the lower eyelid, reduced muscle tone leads to loss of support of the lower lid so that it is not held against the eyeball. The eyelid becomes lax and pulls away from the eyeball (ectropion). In cases of a mild palsy, there is some movement of the eyelids, but the blink and closure may be incomplete. Such patients do have better function and fewer problems.

Secondly, the eyelids perform many functions such as forming a barrier to damage and drying of the front of the eye. They also stop bacteria from sticking to the front of the eye. As well as lubricating the eye, tears wash away these organisms and help kill them with their many antimicrobial substances. Unfortunately, on occasions, brain surgery may damage the nerve to the gland that produces the tears (lacrimal gland), and this can add to the problem of reduced eye closure.

During surgery for acoustic neuroma, the facial nerve may have to be sacrificed. In this case, the facial palsy will be permanent. On other occasions a facial nerve may only be swollen due to the surgery and so there is a good chance for full or partial recovery given time. In my experience, if there is little recovery six months following acoustic neuroma surgery, then there is less chance of a full recovery. However, nothing is ever 100% and I have rarely seen patients achieve recovery even several years following surgery.

Thirdly, if the nerve responsible for giving sensation to the eye, the trigeminal nerve, is also affected, drying or damage may occur to the eyeball and affect vision. Any



Patient with a left facial palsy; there is drooping of the left eyebrow and side of mouth.



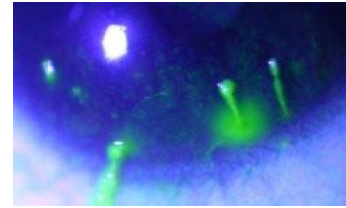
The patient has been asked to close their eyelids tightly. The left eye is unable to fully close and the lower part of the eyeball is exposed (lagophthalmos).

damage usually presents to a doctor late on as patients often have no pain.

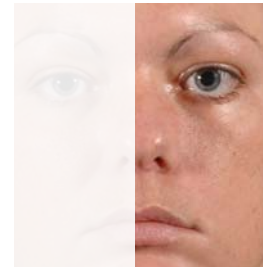
Many other factors also affect the extent to which a facial palsy impacts a person. For instance, the age of a patient influences the cosmetic appearance. Younger patients have stronger tissue and better support for the eyebrow and lower eyelid. However, in older patients there is a loss of strength in the facial tissues that allows the brow and lower eyelid to sag. This is compounded by the loss of muscle tone and increased thinning of the tissues of the eyelids in patients with a facial palsy, as well as due to effect of gravity when standing.

Contraction of the muscle of the forehead, under the control of the facial nerve, is responsible for the arched and high position of the eyebrow. In facial nerve palsy, the eyebrow tends to fall and covers the skin of the upper lid. The eyebrow is relatively bulky and can also push down the skin of the upper lid.

As well as changes to the eyelids, a facial palsy can have serious psycho-social effects on the patient. The facial nerve supplies muscles of facial expression, and when these are not working fully or at all, then the ability to express ones feelings by facial expressions is lost. Indeed the asymmetry caused by a facial palsy can often be very embarrassing. This can curtail a person's social activities and reduce their chance of continuing or gaining employment.



Changes of dryness affecting the lower part of the cornea.



Patient with a left facial palsy. Good brow position is maintained because of the young age of the patient, but there is ectropion and drooping of the mouth.



Mr S A SADIQ DO MRCOphth FRCS FRCOphth DM
CONSULTANT OPHTHALMIC SURGEON



Ahmed's career

Ahmed qualified from the University of London in 1987, and started training in Ophthalmology in London in 1989. He was a registrar and a fellow in Nottingham, and was appointed as Consultant Ophthalmic Surgeon specialising in phacoemulsification and oculoplastics at the Manchester Royal Eye Hospital in December 1998. He has over 40 publications, more than 40 presentations, and a DM (thesis on endonasal laser DCR).

Ahmed's roles at the Manchester Royal Infirmary & University

Ahmed interviews for the Medical School, and teaches medical and optometry students. He examines medical students, and for the MOptom. He is a member of the Local Negotiating Committee on behalf of the Manchester Royal Eye Hospital, and is a North West Representative of the Hospital Consultants and Specialists Association. He has raised money for the New Children's Hospital by arranging sponsored events. Ahmed has drafted a new mobile telephone use policy for the Trust which will become part of the hospital's policies.

Ahmed's roles outside CMMC

Ahmed is a nominated representative of the Royal College of Ophthalmologists (RCOphth) on the General Optical Council (GOC). He is a Member of The RCOphth and a Founder Member of The British Oculoplastic Surgery Society. He is an examiner for the RCOphth as well as part of the Training The Trainers and Microsurgical Skills faculties. He has an interest in facial palsy management and is a medical adviser to the British Acoustic Neuroma association. He used to work as an Ophthalmic Medical Practitioner whilst a registrar, is a member of the Ophthalmic Qualifications Committee of the British Medical Association, and is involved with the Education Visitor Panel of the GOC.

He is active in research, a journal editor and reviewer. He is a committee member of the British International Doctors Association. He is a medical member of the Appeal Panel of The Postgraduate Medical Training and Education Board. As well as a journal reviewer, he is a reviewer for Research for Patient Benefit and Map of Medicine.

Outside medicine, Ahmed is a school governor, is involved with medical charities and community finance initiatives, and is co-chair of the Manchester Christian-Muslim Forum.

The Alexandra Hospital
Mill Lane
Cheadle
Cheshire SK8 2PX

t +44 (0)161 495 7000/1/2/3
f +44 (0)161 428 3666
e a.sadiq@manchester.ac.uk
w www.TheEyeSpecialist.co.uk