**Facial Nerve Paralysis OF FACIAL NERVE PARALYSIS**

Causes of facial nerve paralysis

* ***Supranuclear and nuclear***

Cerebral vascular lesions

Poliomyelitis

Cerebral tumours

* ***Infranuclear***

Bell’s palsy

Trauma (birth injury, fractured temporal bone, surgical)

Tumours (acoustic neurofibroma , parotid tumours , malignant disease of the middle ear)

Suppuration (acute or chronic otitis media)

Ramsay Hunt syndrome

Multiple sclerosis

Guillain–Barré syndrome

Sarcoidosis

**Bell’s palsy (idiopathic facial paralysis)**

Bell’s palsy is a lower motor neurone facial palsy of **unknown cause**, but possibly viral. It is part of the group of idiopathic cranial mono-neuropathies. Bell’s palsy may be complete or incomplete; the more severe the palsy, the worse the prognosis for recovery.

In practice, full recovery may be expected in 85% of cases.

**Treatment of Bell’s palsy should not be delayed.**

**1-** Prednisolone given orally is the treatment of choice, but only if started in the first 24 h. In an adult, start with 80 mg daily and reduce the dose steadily to zero over a period of 2 weeks.

**2-** Surgical decompression of the facial nerve is a matter of controversy: some authorities decompress at an early stage: most do not advise decompression.

**3-** Tarsorrhaphy may be needed to protect the cornea of the unblinking eye.

**Do not make a diagnosis of Bell’s palsy until you have excluded other causes. If recovery does not take place in 6 months, reconsider the diagnosis.**

**Herpes zoster oticus**

Herpes zoster oticus is defined as a herpetic vesicular rash on the concha, external auditory canal or pinna , otalgia with a lower motor neuron palsy of the ipsilateral facial nerve.

Herpes zoster oticus is commonly known as **Ramsay Hunt syndrome** .

herpes zoster oticus is the second commonest cause of unilateral facial palsy after idiopathic Bell's palsy.

**pathology**

The disease is a reactivated varicella zoster infection from dormant viral particles resident in the geniculate ganglion of the facial nerve and the spiral and vestibular ganglia of the VIIIth nerve.

**DIAGNOSIS**

The diagnosis is essentially still a clinical one, with magnetic resonance imaging (MRI) and cerebrospinal fluid (CSF) analysis having been shown to have no role in establishing either diagnosis or prognosis.

The VIIIth nerve may be involved to a variable degree, resulting in hearing loss, tinnitus and/or vertigo.

Auricular pain is often the first symptom and other cranial nerves are frequently involved. In 14 percent of patients, the rash is not present initially but develops several days after the onset of pain and facial palsy. In some cases, the vesicular rash may in fact present on the tongue or pharyngeal mucosa and never present in the ear.

**OUTCOMES**

In untreated patients, over 60 percent develop a complete facial paralysis within a week and this figure is even higher in individuals over the age of 50. If the palsy is complete, only 10 percent will get a full return of normal function.

**Treatment**

Improved outcomes were obtained if individuals were commenced on acyclovir and prednisolone within three days of the onset of symptoms.

Treat early with oral acyclovir (800 mg x 5/day) and prednisolone (1 mg/kg/day).

* Treat before the vesicles appear.

**Bullous myringitis**

Bullous myringitis (myringitis bullosa haemorrhagica) is the finding of vesicles in the superficial layer of the tympanic membrane.

An infection by influenza virus or by *Mycoplasma pneumonia* has been suggested as the aetiological agent.

**SYMPTOMS**

Sudden onset of severe, usually unilateral, often throbbing **pain** in the ear is the most common presentation. The symptoms usually set in during or following an upper respiratory tract infection. A bloodstained **discharge** can be present for a couple of hours. A hearing impairment (conductive and/or sensorineural) is common in the affected ear.

**SIGNS**

Otoscopy reveals blood-filled, serous or serosanginous blisters involving the tympanic membrane and sometimes the medial aspect of the ear canal

**DIAGNOSIS**

The clinical entity, bullous myringitis is based on physical examination. The main differential diagnoses are acute otitis media, herpes zoster oticus.

**OUTCOMES**

In the vast majority of cases a complete recovery is seen within days. however some cases may develop some degree of sensorineural hearing loss.

**MANAGEMENT OPTIONS**

In cases without middle ear affection and without sensorineural hearing loss, **only analgesics** are recommended . When the middle ear is affected, antibiotics can be used as in the treatment of acute otitis media

**Auricular hematoma**

Haematoma auris is a collection of blood between the auricular cartilage and perichondrium. The haematoma is usually produced by trauma, although occasionally the spontaneous rupture of a blood vessel may be the cause.

This occurs almost exclusively on the anterior surface of the auricle where the skin is tightly adherent to the underlying perichondrium, so that shearing forces applied to the ear separate the perichondrium from the cartilage. On the posterior surface, intervening areolar tissue allows the skin to glide over the perichondrium. Rarely, a tear through the cartilage can allow haematomas to collect under the perichondrium on both sides of the cartilage.

**DIAGNOSIS, CLINICAL PICTURE AND OUTCOMES**

There is usually a history of trauma, often sports-related; wrestling and rugby scrumming classically producing these shearing injuries. The haematoma is **painless** and inflammation is **minimal**. If left untreated, the natural outcome is thought to be deformity of the pinna and the classic 'cauliflower' or 'wrestler's' ear.

More rarely, supervening infection can lead to perichondritis and cartilage necrosis - particularly if the cause or the subsequent treatment breach the skin barrier

**MANAGEMENT OPTIONS**

The haematoma requires evacuation observing strict asepsis. This is achieved through either **aspiration** with a thick bore needle or, if this is inadequate, **an incision**. Such an incision can be hidden on the anterior surface by placement parallel to natural contours. Alternatively, a posterior incision with removal of a small 'window' of cartilage has been advocated.

The fluid re-collects after simple aspiration. Pressure and/or a drainage system is required to prevent this.

Persistence of serosanguinous fluid in the subperichondrial plane for more than seven to ten days results in the formation of unsightly fibrous cartilage.

**Infection of the pinna**

**Perichondritis**

It is inflammation of the covering of the cartilage. It is either due to infection of haematoma or other injury, or may complicate severe otitis externa .It may happen as a complication of mastoid surgery when the cartilage is cut in the presence of gross infection. The infection may be introduced by aspiration or incision, a burn or insertion of ear ring.

**Signs and symptoms**

The pinna is uniformly enlarge

The pinna become thickened

The surface of pinna is red, and shiny

Pain, severe pain

Constitutional symptoms may present

**Treatment**

* A broad spectrum antibiotic "antipseudomonal"
* A swab may be needed for culture and sensitivity
* If subperichondrial abscess form, it should be incised and drain, but incision should be delayed until definitive fluctuation can be elicited as a premature incision may result in further spread of infection.

**Foreign body**

* **Living insects** should first be killed by instilling oil into the meatus to drown them before removal.
* **Irregular/soft graspable non-living objects** (dead insects, cotton wool, paper, small toys) may be removed with a pair of crocodile forceps.
* **Organic objects** (beans, etc.), which may absorb water, swell and cause pain, should not be syringed.

* **Button batteries** should not be syringed as they may leak on exposure to water. They should be removed **urgently** .
* **Inorganic round/smooth non-graspable** (beads, erasers). Smooth, firm, rounded objects, such as beads or toy gun pellets, are difficult to grasp and can easily be wedged deeper into the meatus.Syringing is safe and is often successful, but may fail with tightly impacted foreign bodies. These objects are best removed using microscopic vision and a blunt ear hook .

**COMPLICATIONS**

Complications may be caused by the action of introducing the foreign body or the foreign body itself. In general, these are limited to lacerations of the canal skin and otitis externa. Rarely, facial nerve palsy may occur secondary to leakage of alkaline material from a button battery and necrosis of the surrounding tissue.

**Tumours of the pinna**

May be **benign** like papilloma , fibroma and chondroma

May be **malignant** like:

* Squamous cell carcinoma present as an indurated ulcer with everted margins , the regional lymph nodes may be involved
* Basal cell carcinoma "Rodent ulcer"

Result from proliferation of basal cell of the epithelium, it is found less commonly in the auricle than on the skin of face and forehead.

It occur more likely over 50 year old, usually asymptomatic, but it can be invasive destroying the cartilage and bone. it began as flat, slightly raised lesion developed to rolled edge with a penetrating ulcer which bleeds readily.

The external auditory meatus less commonly affected.

**Congenital abnormalities:**

The auricle develops from series of six tubercles, anomalies of development may be associated with others in the middle or inner ear or congenital malformation of the face or lower jaw.

**Accessory auricles**

They are usually found in the preauricular region ,but may occur anywhere along a line extending down to the sternoclavicular joint. They may appear to be simple skin tags but frequently contain cartilage.

**Bat ear**

This is the most common congenital deformity of the ear, the condition is usually bilateral ,and the child may be teased at school. The prominence is usually due to an absent antihelical fold but, in some cases, the conchal bowl is excessively deep.

**Lop ear**

Less common, the superior part of the pinna appears to be falling forwards .

**Anotia**

Total absence of the auricle, no obvious external ear .

**Microtia**

The pinna is rudimentary and malformed usually placed lower and more anteriorly than normal.

These anomalies usually associated with meatal atrasia and other abnormalities of middle ear