

TYMPANOPLASTY

Why do we do it?

Tympanoplasty is an operation to repair holes in the eardrum, tympanic pocket retractions. It might be extended to an ossiculoplasty (ossicles repair) or cholesteatoma surgery.

Tympanoplasty is recommended when there is:

- Eardrum perforation or retraction
- Cholesteatoma (skin growing from its normal position on the surface of the drum into the middle ear space and mastoid. It slowly destroys the structures of the middle and inner ear)
- Otosclerosis (fusion of the stapes that results in hearing loss, tinnitus and vertigo). Surgery is proposed after trying hearing aids

How is it done?

The operation is done under general anaesthesia.

- Eardrum perforation or retraction : small incision in front of the ear. A portion of the skin of the ear canal and the tympanic membrane itself are then delicately elevated to allow access to the back of the tympanic membrane. The graft itself is most commonly tragal cartilage harvested from beneath the skin incision. Once the graft is in place the ear canal is packed with surgical foam soaked in antiseptic to hold the graft in place. The skin incision is sutured and an antibiotic soaked wick is placed in the ear canal. A dressing is then put over the ear, held in place by a crepe bandage
- Ossiculoplasty: tympanoplasty may be accompanied by a control of the ossicles of the ear (or even their repair by a procedure ossiculoplasty), an exploration of mastoid (bone located behind the ear) or enlargement of the calibre of the external auditory canal
- Cholesteatoma: the incision is usually situated behind the ear, the eardrum is repaired with a cartilage graft, to replace the ossicles, we use autologous or synthetic materials depending

situations, such as cartilage fragments taken from the tragus or concha or remains of ossicles or small bone pieces or synthetic prostheses (Teflon, ceramic, titanium etc.). To remove the cholesteatoma, we are sometimes obliged to enlarge the cavity of the middle ear and mastoid, to facilitate ablation and improve post-operative follow up

- Stapedectomy (otosclerosis): the affected stapes is then partially removed and replaced with a prosthetic stapes thereby re-establishing soundwave transmission to the inner ear

After tympanoplasty:

- Like most ear operations pain is minimal. The most common issue in the early post-operative phase is dizziness (especially after stapedectomy) which can be quite significant but generally resolves within a few days or less
- The morning following surgery the bandage will be removed and replaced with the smaller cotton wool dressing
- Mild bleeding might occur the first days and is not to worry about
- Exercise is to be avoided for three weeks. Swimming is to be avoided for at least eight weeks. Aeroplane travel is to be avoided for six weeks. Travelling in unpressurised aircraft and diving are prohibited after stapedectomy surgery

Are there any risks?

Short term:

- Pain in the operated area or the area of graft removal, as well as discomfort to chewing are usual in the first few days following the intervention
- Mild bleeding the first days
- Infection
- For Cholesteatoma: Even if they remain exceptional, main complications are pre-

existing hearing impairment, which can lead to a total and final hearing loss of the operated ear, tinnitus, dizziness and balance disorders, taste disorders, facial paralysis, neurological or meningeal complication. **All these complications are exceptional. Your cholesteatoma pathology can itself even lead some of these complications during its spontaneous evolution**

- Stapedectomy: success rates with Stapedectomy are high however there is a small risk of around 1% of complete hearing loss in the operated ear. If this does occur a hearing aid will no longer help and the only way to reinstate some hearing in the affected ear is a cochlear implant. There is also a small risk of worsening tinnitus, balance or taste

Longer term:

- Graft's necrosis is possible. Any abundant or purulent ear flow after the intervention should be reported to the surgeon
- A narrowing of the external auditory canal, due to the incision, will be followed up with appropriate treatment
- The absence of auditory gain and / or residual perforation of the tympanic membrane can be seen after healing
- Cholesteatoma : Given the surgical incision behind the ear, an ear protrusion might occur but is usually transient. Follow up is very important because of the risk of recurrence, even with a well driven surgery. This may lead to a new surgical procedure (usually 12 to 24 months after the first operation but sometimes later). The intervention, even well driven, may not protect from functional failure (graft's necrosis and / or absence of auditory gain)

