Dr Jason Roth – Ear, Nose and Throat, Facial Plastic Surgeon

Myringoplasty – repair of the eardrum

Myringoplasty is an operation to repair a perforation (hole) in the eardrum. The surgery results in a sealed, water resistant ear and greatly reduces the chance of infections following swimming and showering. It may also improve hearing and can prevent future hearing loss and the development of a cholesteatoma (cyst) in the eardrum.

Before surgery

It is important to advise your surgery if the ear due for surgery begins to discharge or feels wet in the weeks before surgery. You will need to use some antibiotic drops to clear up any infection. The success rate for the repair falls dramatically if surgery is done when the ear is infected.

The Myringoplasty Procedure

The surgery is performed under general anaesthesia. Typically a small incision is made hidden behind the ear and a piece of fascia from the temporalis muscle is taken to use as a graft. Sometimes a piece of ear cartilage is used for this purpose.

The ear canal skin and ear drum is then carefully elevated and the graft is positioned on the underside of the eardrum. A special dissolvable sponge material is placed deep to the graft to hold it in place while it is healing. This is slowly absorbed by the body over several weeks. The eardrum is then carefully laid back down and the incision behind the ear closed with dissolvable stitches.

A soft sponge is placed in the ear canal for the first week and is gently removed in the office. This protects the eardrum while it is healing.

In some patients a procedure called a canalplasty is performed at the same time as a myringoplasty. This involves removing bone from the ear canal to widen it and allow better access to the perforation during the procedure.

In some patients with very small perforations a small piece of fat tissue taken from the earlobe can be placed in the hole without the need for the incision behind the ear.

Recovery after surgery

Patients typically stay one night in hospital but some may be able to go home the same day. A crepe bandage is used to hold the ear dressing in place. This is removed the following morning. The dressing may have some blood drainage on it and the ear may weep some blood for a couple of days. This is usually only very minor and can easily be controlled by placing a small ball of cotton wool in the ear and changing it as needed. During the healing period you will need to avoid getting the ear wet.

At the first post-operative visit I will carefully remove any packing in the ear canal and check that the incision is healing well.

Most patients can return to work in about one week. Healing should be complete in about three months. At that point a hearing test is usually done to assess how close hearing now is to normal. Patients with longstanding perforations or a history of many severe ear infections often have some underlying permanent hearing loss that is not corrected by closing the eardrum hole. Flying is not advisable for one or two months following surgery.

The possible complications of surgery

Complications with this operation are rare. The most important one to be aware of is that there is a 10-15% chance of the graft not "taking" completely. This can mean that the hole is not completely closed and may require further surgery.

General risks of surgery

- Infection of the incision site
- Pain
- Nausea (typically related to the anaesthesia and settles within 24 hours)
- Allergy to anaesthetic agents or antibiotics
- Slow healing (most common in smokers and patients with Diabetes)
- Side effects associated with general anaesthesia, that may include stroke, heart attack or deep venous thrombosis

Specific risks of myringoplasty

- Graft Failure – In 10-15% of patients the graft does not "take" leaving the perforation either the same size or with a small persistent hole. This may require further surgery.
- Tinnitus – This is a ringing noise in the ear. It can often be present in the week or so after surgery while the packing is in place. It occasionally persists. If present before surgery it may occasionally become worse.
- Balance disturbance – Patients often have some balance disturbances for a few days after surgery but this usually settles down quickly.
- Hearing loss – generally hearing does not worsen after surgery. There is a very rare chance (less than one patient in 1000) of permanent total deafness in the operated ear.
- Numbness – There may be some numbness of the ear, particularly the top half. This generally returns to normal within a few months.
- Taste disturbance and dry mouth – the nerve to taste sits just under the eardrum and can be bruised or injured during surgery. Patients may notice a change in their taste. Generally this is not permanent.
- Facial paralysis – The facial nerve sits close to the ear canal and middle ear. Although usually far away occasionally it may be injured or become inflamed. This may cause paralysis of facial muscles on that side of the patient. Very rarely this is permanent (less than one patient in 1000).
- Blunting- After a canalplasty, excessive scar tissue may form, partially blocking the deep ear canal and leading to some hearing loss. Such 'blunting' of the angle between the front of the ear drum and the ear canal can be difficult to correct.
- Jaw Pain- the jaw joint (temporomandibular joint) is located a few millimetres in front of the ear canal. It can become inflamed during surgery or go into spasm. Generally this settles within a few days after surgery.
- Inadequate hearing – Despite closing the hole in the eardrum, hearing may still be poor. This is usually because there has been damage from infections to the hearing mechanism within the inner ear. Patients may still need a hearing aid.
- Cholesteatoma - Sometimes, skin may grow from the edges of the perforation into the middle ear. If this skin is not removed completely at the time of operation, a skin cyst can develop deep to the grafted eardrum. This cyst, or cholesteatoma may be detected by the surgeon at a routine six month or twelve month postoperative visit.

Report to your surgeon

Tell your surgeon at once if you develop any of the following:

- Temperature higher than 38 degrees Celsius or chills.
- Persistent pain, redness, pus or swelling around the wound
- Any troublesome ear symptoms
- Extensive discharge from the operation area
- Nausea or vomiting
- Any concerns you have regarding your surgery