

Myringotomy and Insertion of Grommets

WHAT ARE MYRINGOTOMY AND INSERTION OF GROMMETS?

Myringotomy is a simple procedure to drain a build-up of fluid in the middle ear. A small incision is made in the ear drum (tympanic membrane) and the fluid is allowed to drain or is suctioned clear. Often, tiny, self-retaining plastic ear tubes (sometime called grommets) are inserted into the eardrum. The operation, which may take up to half an hour, is performed in the operating room, usually on an outpatient basis. General anesthesia is usual, although local anesthesia is sometimes used for older children and adults.

RISKS AND BENEFITS

Myringotomy and the use of grommets corrects hearing loss and prevents further deterioration in most cases. Re-insertion of the grommets may be required in a small minority. In children with middle ear infection the procedure is justified, even though the condition resolves itself naturally by the eighth or tenth year, to prevent the social and educational handicap of several years' hearing loss. Also, the untreated condition may lead to permanent damage in the inner ear. Surgery is also successful in preventing perforation and relieving the intense pain of middle ear infection, a condition which, if untreated, can lead to serious infection, possibly extending to the brain or causing facial paralysis.

The risks of the procedure are low. They include (in addition to those of general anesthesia): damage to the tiny bones (ossicles) of the middle ear.

WHY IS IT PERFORMED?

One of the commonest surgical procedures throughout the world, myringotomy is most often performed for a condition of the middle ear known as secretory otitis media. Usually painless, this condition is characterized by an accumulation of sticky fluid in the middle ear resulting in some hearing loss. It is mostly seen in young children. Their Eustachian tube, running between the middle ear and the back of the throat, is shorter and lies more horizontally than in adults, predisposing to middle ear inflammation.

Sometime secretory otitis media (which often follows repeated upper respiratory tract infection) can be treated successfully with antibiotics and nasal decongestants to dry up the secretions. If the condition persists, myringotomy is performed to evacuate the middle ear cavity. Grommets may be inserted to substitute temporarily for the eustachian tubes in equalizing pressure between the middle ear and the outer ear canal and also to minimize any further build-up of fluid. Mostly the grommets are expelled naturally, as the incision closes over, within 6-12 months of insertion (by which time natural ventilation and drainage should be re-established). If not, they can be removed painlessly in the doctor's office. Rarely, myringotomy may be recommended for acute middle ear infection (suppurative otitis media). In the painful condition (also more common in children), there is an accumulation of infected matter in the middle ear, pressing against the eardrum and threatening perforation. Here again, surgery is only performed

if the condition does not respond to antibiotics. More rarely still, myringotomy may be undertaken for diagnostic purposes where there is suspected cancer at the back of the nose or throat. Fluid obtained during the procedure is sent for laboratory tests.

THE PROCEDURE

PREPARING FOR SURGERY

There is no special preparation for this procedure, although, in the case of a child, an explanation should be given in terms that he or she can understand. Where general anesthesia is planned, nothing should be taken by mouth for at least six hours beforehand. On admission to the day care facility, a narrow swathe of hair around the ear may be shaved. Premedication to relax you (or your child) will be given about an hour before the procedure is due to begin.

IN THE OPERATING ROOM

The surgeon works with the patient lying, usually anesthetized, on his or her back, with the head cushioned on a soft ring. The outer ear and surrounding skin are cleansed and sterile drapes applied (and, if general anesthesia is not required, a local anesthetic is injected at this point). Working with an operating microscopy, the surgeon begins by making a small nick in the eardrum. Any fluid present in the middle ear is allowed to drain, or suctioned clear, and the area is swabbed clean. A tiny grommet is inserted gently into the surgical aperture. The procedure is repeated on the other ear. You will be taken to the recovery room briefly for monitoring as you come out of the anesthetic.

AFTER THE PROCEDURE

You may feel sleepy and be aware of discomfort on one or both ears. If necessary, drugs will be given to relieve pain and nausea. You will be offered fluids at first and light refreshments later in the day. You should be well enough to return home in a few hours.

GOING HOME

Before leaving, you will be given an appointment for a postoperative checkup with your surgeon. You should take it easy for a day or two after surgery and avoid driving a car or operating machinery for at least 24 hours. Any discomfort in the ears should disappear within a few days. If grommets have been inserted, you may be advised to avoid any situation which causes pressure changes in the ear (such as flying) while these remain in place. You may be advised not to swim, or at least not to do so without closely-fitting earplugs, until the eardrum has healed. Similarly, you should avoid getting water in your ears when you take a shower or bath. Children in particular will need regular check-ups as the condition may recur.

POSSIBLE COMPLICATIONS

There should be no complications following myringotomy and insertion of grommets if the postoperative instructions are followed carefully. However, if there is increased discomfort, or continued bleeding or discharge from the ear canal, you should call the doctor's office for advice. Sometimes one or both grommets may be expelled prematurely, in which case the procedure may have to be repeated.

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