Queensland OTOLOGY

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CHOLESTEATOMA SURGERY

Risks, Complications and Post-operative Instructions

Cholesteatoma is a cyst or sac of eardrum-type skin that occurs in the middle ear. Whilst a few uncommon congenital cysts of this nature are found, the great majority are derived from the eardrum itself, mostly as a result of dysfunction of the Eustachian tube.

The middle ear is somewhat like a watch, with the drum on the outer side, tiny hearing mechanisms (the ossicles), and the wall of the inner ear, deeper inside. The ossicular chain is suspended in mid air in order to vibrate freely. The air of the middle ear enters only when the palate muscles open the Eustachian tube.

If this action fails, the middle ear pressure drops, causing a suction effect that damages the drum and the middle ear linings. Under this pressure, the drum gradually collapses, stretches and then infiltrates into the middle ear. With this extension, the normal cleaning mechanisms of the skin fail, with an accumulation of infected dead skin within the sac, and consequent erosion of the bony confines of the ear, causing deafness, pain, discharge and other damaging or fatal consequences. The situation is irreversible without surgery.

Correcting the presence of cholesteatoma depends on the extent of the disease.

Lesser congenital cysts and the earlier drum collapse forms may be overcome via surgery performed entirely through the external auditory canal (transcanal surgery), but the common more extensive patterns require mastoidectomy surgery (removal through the stub of bone behind the ear) that is usually performed via an incision behind the ear.

Mastoidectomy surgery for cholesteatoma follows two patterns, the choice of which remains controversial. Traditionally, cholesteatoma has been removed by effectively gutting the mastoid area in all or part, creating a cavity in continuity with the external canal, in order to minimise the risk of the major complications of the disease (radical, open cavity, or canal-wall-down mastoidectomy). This endeavour to seek safety, however, may become complicated by infection in the created cavity, which may produce long-term discomfort and a need for perpetual cleaning.

Alternatively, cholesteatoma is managed by “closed cavity” surgery (intact canal wall or canal wall up mastoidectomy, combined approach tympanoplasty). This aims to preserve function and avoid complications, but risks recurrent or residual disease problems. Specialist otologists tend to favour the latter method.

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More information

- Middle Ear Infections
- Open Techniques
- Intact Canal Wall

RISKS AND COMPLICATIONS

Hearing

Together with disease removal, the surgery normally aims for the best possible hearing outcome, but this is sometimes not achieved, due to the extent of disease or other factors, especially ongoing tubal dysfunction. Also although many cases have ringing (tinnitus) in the ears before surgery, this may not be eliminated and can be worse in a minority.

Generally, the hearing takes perhaps 1-2 months to fully recover, if hearing repair surgery has been performed. Gurgling, crackling, echoing or hollow sounds during this period are indicative of a good outcome.

Dizziness

Balance upsets after tympano-mastoid surgery are rare, but in some cases of more advanced disease the balance organs are traumatised during removal of disease or similar actions in the course of the surgery. Fortunately this generally fades, perhaps over a two month course.

Residual/Recurrent Disease

Ongoing disease troubles both techniques, in differing patterns. Open cavity procedures are notorious for chronic infection and discharge from the cavity, which commonly requires regular cleaning to remain trouble-free. Intact canal wall surgery requires greater skill to prevent recurrent disease, and planned second staged surgery may be necessary to ensure the absence of residual disease foci.

Facial Nerve Paralysis

Even in expert hands paralysis of the side of the face may occur for a variety of reasons in ear surgery, in perhaps every 1-1000 cases. Chronic ear surgery not uncommonly encounters the nerve in a diseased state, requiring extra vigilance on the part of the surgeon. Paralysis may last several months and then recover completely or partially. Temporary paralysis may also occur from local anaesthetic injection, lasting a few hours and then recovering. Eye irritation from these incidents may require an ophthalmologist's care.

Drum Perforation

Generally in chronic disease cases drum healing is uneventful, but perforation may occur requiring limited revision surgery to overcome the problem that is fortunately relatively rare.

Taste Disturbance

The chorda tympani is the nerve that provides taste sensation to the side of the tongue. It passes across the field of surgery in many ear disease cases and not uncommonly is bruised or cut in the course of the procedure. Taste disturbance occurs in about 10% of cases and this may last for up to 12 months, a few remaining permanent, sometimes with slight dryness of the mouth,

Infection, Pain

The nature of surgery predisposes to general surgical risks but fortunately the ear is generally not troubled by these problems to a severe or prolonged extent.

If an incision has been made behind the ear, it is common for the upper ear to feel numb for up to two months, before fading

Uncommonly, a collection of blood may form under a wound behind the ear. This may cause more noticeable swelling and discomfort.

POSTOPERATIVE INSTRUCTIONS

Surgical wound site

A head bandage applied after surgery be will removed before discharge from hospital. Keep the wound dry for a week, at which time you will have an appointment to have the sutures removed. The site may be washed thereafter. Normally a degree of swelling may cause the ear to be more prominent. This fades over two weeks.

Bruising is common, around the ear and in the neck.

External canal site

The ear bowl and canal will have dressings that may become moist from slight bloodstained discharge. Replace the ear bowl dressings as necessary, but leave to canal dressings unmolested until their removal, usually 2-3 weeks after surgery. Until removal of the dressings, avoid heavy exercise, to reduce perspiration moisture within the canal. Removal of dressings is usually brief and pain-free.

Also avoid forced nose blowing or occluded sneezing, as this may dislodge graft material in the ear. Aircraft flight should be avoided for one month.

Antibiotics will be prescribed and provided prior to discharge. Take these as directed on the packet. Sometimes diarrhoea may occur; consult your pharmacist re medicine for this, but continue the antibiotics and take probiotics to help settle matters.

Pain, Discomfort

Analgesics will be given both in hospital and supplied at discharge. Pain after ear surgery is normally limited, but if concerned contact us for advice. If an incision has been performed behind the ear, some intermittent stabbing type pain may be experienced and which fades in a few weeks. Nausea is less common, but advise our staff if you require medicine for this.

Activities

- Rest well after surgery; recovery varies from person to person.
- Return to work when well; this is normally after a few days, unless dizziness or other problems intervene.
- The ear canal dressings are removed at 3 weeks after surgery, and the ear reviewed after that. Audiology is undertaken at two months. Subsequent reviews occur on an individual basis.

Our goal in ear reconstruction is to deliver the best results with the greatest certainty and minimal distress. But in surgery there are no guarantees of success. If you have had a lesser result after surgery, we will do our best to treat the problem, hopefully overcoming this.

Please let is know at Queensland Otology if you have any concerns or questions, whether before or after:

Contact Numbers

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