OPERATIVE PROCEDURE FOR CHRONIC OTITIS MEDIA

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After intubation (with endotracheal tube taped to side of mouth opposite of the cochlear implant side):

3 belts placed on patients with test rolling to both sides (to make sure the patient does not slide off). 4 belts can be used for obese patients (in addition, make sure the bed is large enough to hold an obese patient safely)

Transtympanic steroid perfusion performed at the beginning of the case (to reduce the risk of iatrogenic sensorineural hearing loss during surgery and to reduce middle ear fibrosis). This can also be done at the end of the case in case granulation tissue or pus are obscuring the middle ear space.

Facial nerve monitor electrodes to be placed (red at mouth, blue at eyes, and ground electrodes at forehead). 4 sets of electrodes can be placed if the patient has any pre-existing palsy (rare).

Prep with betadine from midline of head to clavicle

Make sure sterile, surgical towels are placed with the face and electrodes showing

Elevate the head of bed to reduce venous bleeding

Surgical hypotension is used (systolic blood pressure is kept at 100mmHg, if possible)

Inject the incision (C-shaped, 5mm behind postauricular crease)- do this before prepping and draping. The ear canal is also injected (if tragal cartilage is to be harvested). The posterior surface of the auricule is also injected with local (in case a split-thickness skin graft (STSG) is to be obtained).

No hair shaving

No monopolar cautery is allowed if the patient has a pacemaker or cochlear implant

Tragal cartilage graft is harvested with a large-inverted U-incision on the posterior aspect of the tragus. The cartilage is then trimmed with the Kurtz cartilage knife.

Large Palva flap needs to be created (with the superior limb at the zygomatic root longer than the inferior limb). Be careful not to tear the external auditory canal skin.

A postage stamp size of true temporalis fascia is obtained (not temporoparietal fascia). The fascia is allowed to dry in the fascia press.

A well-saucerized mastoidectomy is performed, with identification of the tegmen, sigmoid sinus, antrum, incus, and lateral semicircular canal. If the mastoid is hypopneumatized (which it usually is in chronic ear cases), the digastric is also identified. Burrs used: 6mm cutting, 5mm coarse diamond, 4mm fine diamond, 3mm fine diamond, 2mm fine diamond. The 1.5mm and 1mm diamond's are rarely needed.

The mastoidectomy is done with the surgeon's eyes; only when the facial recess is started is the microscope brought in to view the facial recess.

Open the facial recess to provide adequate exposure to the round window and hypotympanic air cells (but without sacrifice of the chorda tympani nerve, if possible)

Expose the entire round window niche, visualize the stapes, and the undersurface of the tympanic segment of the facial nerve

The incus buttress is preserved if possible. If needed, the incudo-stapedial (IS) joint can be cut and then the buttress drilled. The IS joint cut also allows manipulation of the tympanic membrane (TM) and the lateral ossicular chain.

The CO2 laser is use to ablate granulation tissue and hypertrophic mucosa.

The TM perforation is rimmed with the CO2 laser (either Omniguide or LEI fibers). Typically, 2 watt setting.

Gelfoam is placed in the middle ear. Both cartilage and fascia are placed to repair the TM perforation. STSG can be used (primarily for anterior perforations).

The packing can be added through the facial recess/posterior tympanotomy route as well.

The Palva flap is closed with horizontal mattress Vicryl sutures after hemostasis has been achieved.

Subcutaneous Vicryl sutures are used to close the skin incision.

Monocryl subcuticular sutures followed by Dermabond can be used to close the skin (as well as running fast absorbing gut).

Deep extubation is performed (to reduce bucking of the patient)

Red or blue Velcro mastoid wraps are placed

The patient is given subcutaneous heparin (to reduce risk of DVT formation postoperatively) as well as IM Toradol (to reduce postoperative pain)

The patient is either sent home or admitted for 23 hour observation

The patient is sent home with prednisone (60mg/day), Pepcid, and occasionally Keflex (500mg 4x/day) for one week (antibiotics are more likely

to be used in smokers and diabetics). The patients can also take Tylenol #3 for breakthrough pain. However, when at home, Advil or Aleve are recommended as the main pain relievers

The mastoid dressing can be removed the day after surgery (or the patient may keep it on if he/she desires)

The patient should have a postoperative visit one week after surgery (either in-person or via video visit)

The patient is then see at 1-2 months after surgery, 4 months after surgery (with audiogram), and then every 6-12-24 months indefinitely (to assess for long-term results, delayed complications, etc.)

(Thanks to the University of Iowa Head and Neck Protocols for the basic structure of this surgical step sheet)