Getting Started With Endoscopic Ear Surgery - Ergonomics, Instruments, Anesthesia and Patient Selection

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I have nothing to disclose.

No, within the last 12 months I have not had any type of financial arrangement or affiliation with commercial interests related to the content of this continuing education activity that requires disclosure.
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### WHEN DO YOU USE ENDOSCOPIC TECHNIQUES?

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<th>Microscopic</th>
<th>Endoscopic</th>
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<td>Cholesteatoma Involving Antrum</td>
<td>Cholesteatoma Limited to Epitympanum</td>
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<td>Lateral Graft Tympanoplasty</td>
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<td>Stapedectomy</td>
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<td>Cochlear Implant</td>
<td>Infracochlear Approach</td>
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Is there a perforation size or location that you do not use TEES?

What factors do you take into account when deciding that a cholesteatoma cannot be removed with a TEES approach?

Do you find one ear more difficult than the other?
Operating Room Setup
What perioperative steps do you take to optimize hemostasis? (TIVA, elevate head, inject early)
But don’t I need special instruments? No
If you had to choose one instrument to facilitate TEES, what instrument would that be?
Do you have any tips to prevent fogging of the camera?
What power do you use for the light settings?

Do you have other techniques to prevent drying of structures such as the chorda tympani nerve?
14 cm length; 3 mm diameter
0 degree for most situations
3-chip camera
Hemostasis

Careful canal injections

Sharp canal cuts
7200 Beaver Blade

Adrenaline pledges

Patience
How do you control intraoperative bleeding?
Any tips for trimming hair in the external auditory canal?

What do you use to inject? Epinephrine concentration, premixed or self-mixed, syringe and needle size
Placing gelfoam

Assistant places on drape

Stab with annulus elevator

Place in position
Lasers?
Tympanomeatal flap incision
Elevation of tympanomeatal flap
Placement of graft
What is your preferred graft material?

What is your experience with allografts?

Do you frequently use cartilage?
Packing the middle ear
What packing material do you use?

What antibiotic do you place on packing?

What is the patient is allergic to fluoroquinolone?
Explain your post op care.
When to start drops, what drops you use, when do you see the patient for first postop, When do you check hearing?
What is your preferred method for removing bone? Curette, drill, piezoelectric
1) Discuss bed positioning and anesthesia plan prior to the case start.

2) I've had the best luck with the bvi ultracell eye wicks with topical epi 1:10,000 for hemostasis. The OR staff is not going to like that these are not countable, but I only have 6 squares on the field and verbalize every time I take it in and out of the ear. Also, I have them put the epi on the field after the injections have been done so it doesn't get inadvertently injected.

3) It really helps to get staff engagement. Describe what you are doing and show them interesting findings. I've had multiple staff mention how impressive endo ear surgery is and how they can actually see what is going on.

4) Do not be afraid to convert to the microscope.

5) Do simple cases before more challenging cases like OCR.

6) Try to have the 3mm 14 cm scopes available. The 2.7 mm ones seem to bend at time.

7) The horizontal canal is the limit of cholesteatoma resection.

8) Have 0, 30, and 45 degree scopes.

9) bend your own suctions (have up and down)
Tips from Dr. Richard Salzman

1) Avoid 70 degree scopes; I prefer 30 degree scope
2) Don’t buy a scope holder
3) Invest in suction instruments
4) Have microscope draped first 20-30 cases
5) I prefer 11 cm scopes
6) Expect first 10-15 cases to take longer and schedule appropriately
7) Use small needle for EAC infiltration
8) Ignore negative comments of more senior otologists
9) Slow and careful injection
10) Try easy cases with good anatomy (ear tubes, wide EAC)
Questions?