Iatrogenic inner ear dehiscence

Three patients with history of recent lateral skull base surgery, symptoms consistent with inner ear dehiscence, and radiographically proven bony dehiscence on postoperative imaging.

All patients were initially managed conservatively with serial outpatient visits. Two patients with large cochlear and vestibular dehiscences had round window reinforcement procedures. One patient had transmastoid resurfacing for repair of an iatrogenic posterior semicircular canal dehiscence.

Anatomical location of dehiscences; treatment options; subjective auditory and vestibular symptoms pre-dehiscence, post-dehiscence and after dehiscence repair; pre- and post-audiogram when available.

Patient ages were 46, 52, and 60 with two of three being women. None of the patients had subjective auditory or vestibular symptoms of inner ear dehiscence before initial skull base surgery, but they all had development of these symptoms afterwards. All patients were initially managed conservatively, but all ultimately required a surgical procedure. The two patients who elected for round window reinforcements, and the one patient who required transmastoid resurfacing, had significant improvement of symptoms.

Iatrogenic inner ear dehiscence after skull base surgery is best dealt with and repaired intraoperatively. Should intraoperative repair not be possible, transcanal round window reinforcement is a minimally invasive option for medial otic capsule dehiscence, although long-term outcomes are unclear. For lateral otic capsule dehiscence, a transmastoid approach is recommended [1)].

1)
Bartholomew RA, Poe D, Dunn IF, Smith TR, Corrales CE. Iatrogenic Inner Ear Dehiscence After Lateral Skull Base Surgery: Therapeutic Dilemma and Treatment Options. Otol Neurotol. 2019 Feb 15. doi: 10.1097/MAO.0000000000002162. [Epub ahead of print] PubMed PMID: 30807519.