Transmastoid approach

Petrous bone cholesteatoma is a rare pathologic entity and maybe a difficult surgical challenge because of the potential involvement of the facial nerve, carotid artery, dura mater, otic capsule and superior petrosal or lateral sinus.

Eight patients (nine ears) who underwent endoscope-assisted petrous bone surgery for cholesteatoma. Pure tone audiometry, magnetic resonance imaging were performed at preoperatively, and at approximately 12 months postoperatively.

Endoscope assisted surgery was performed in 8 patients and 9 ears. Of these patients, 6 were male and 2 were females. The median age was 19,5 (range 7-52) years. The hearing was able to preserved in 8 ears (8/9). Recurrence disease was observed one ear in long term follow up (1/9). In another one patient, cholesteatoma pearl was removed in the office.

Endoscope-assisted surgery can allow removal of cholesteatoma of petrous apex with preserving hearing. It also provides to remove the cholesteatoma via transmastoid approach for perilabyrinthine space as "minimally invasive surgery" instead of middle fossa approach that is standard surgical procedure. In apical and peri-labyrinthine cholesteatomas, endoscopes allow to preserve hearing with middle fossa approach instead of trans-otic/ trans-labyrinthine/trans-cochlear approach ¹.

The transmastoid approach allows better control of the clivus and paraclival regions, however, the supratentorial part of the lesions are out of surgical view ^{2) 3) 4)}.

to repair of spontaneous temporal bone cerebrospinal fluid leak is highly successful. Furthermore, patients in the series from Kim et al.,had excellent hearing results with closure of their air-bone gap to ≤ 12 dB, which has not been previously described ⁵⁾.

Facial nerve decompression via the transmastoid approach with temporal lobe retraction provides better exposure to the key areas around the geniculate ganglion without complications ⁶⁾.

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