Hearing loss etiology

Post-traumatic hearing loss

Post-traumatic hearing loss

Cerebellopontine Angle tumor

see Cerebellopontine Angle tumor. see Vestibular schwannoma

Hearing loss can be associated with a decrease in cerebrospinal fluid (CSF) pressure because changes in CSF pressure induce changes in perilymph pressure. Hearing loss after neurosurgical procedures has been reported.

Cerebrovascular disease.

Neurofibromatosis Type 2

Hearing will deteriorate in some intracanalicular vestibular schwannomas, regardless of tumor growth. Hearing deterioration, if on a large scale, most likely occurs early in follow-up [1].

Hearing deterioration is a major concern for hearing-preserved patients with vestibular schwannomas who are treated with stereotactic radiosurgery (SRS). Thus, determining which patients are more likely to have worse hearing outcomes following SRS may facilitate clinicians in deciding whether conservative policy should be applied in the interest of hearing preservation.

Identification and protection of the cochlea during anterior petrosectomy is key to prevent hearing loss. Currently, there is no optimal method to infer the position of the cochlea in relation to the Kawase quadrangle, therefore damage to the cochlea during anterior petrosectomy remains a substantial risk.

Kawase approach was simulated in eleven specimens. After a subtemporal approach, foramen spinosum and foramen ovale were identified. Anterior petrosectomy was performed and the upper dural transitional fold (UDTF) was identified. Two virtual lines, from foramen spinosum (Line A), and the lateral rim of the foramen ovale (Line B), were projected to intersect the UDTF perpendicularly. The cochlea was exposed and the distances between Lines A and B and the closest point of the outer rim and membranous part of the cochlea were measured.

The average distance between Line A to the bony and membranous edges of the anteromedial cochlea was -0.62±1.38 mm and 0.38±1.63 mm, respectively. The average distance between Line B to the bony and membranous edges of the cochlea was 1.82±0.99 mm and 2.78±1.29 mm, respectively. Line B (cochlear safety line) never intersected the cochlea.

The cochlear safety line is a reliable landmark to avoid the cochlea during the Kawase approach. When expanding the anterior petrosectomy posteriorly, the “cochlear safety line” may be used as a reliable landmark to prevent exposure of the cochlea, therefore preventing hearing loss [2].

Pigmented villonodular synovitis (PVNS) of the temporomandibular joint (TMJ) represents a rare entity that can present with a variety of symptoms including unilateral hearing loss [3].

Cerebrospinal fluid shunting and hearing loss

Cerebrospinal fluid shunting and hearing loss.

1)
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