

decompression surgery within 2 weeks after trauma reached 92.9%, resulting in a significantly better outcome than later decompression surgery. The ideal time for decompression surgery for the traumatic facial nerve paralysis was the first 2 weeks in patients with severe, immediate-onset paralysis. Recently, we modified the later decompression surgery using bFGF in a gelatin hydrogel to promote the regeneration of denervated nerves. Our experimental study suggested that bFGF-impregnated biodegradable hydrogel facilitates regeneration of the facial nerve in guinea pigs due to the sustained release of bFGF. Clinically, this therapeutic regimen may be useful for facial nerve decompression surgery, which is indicated for severe facial nerve paralysis. The efficacy of the novel decompression surgery will be presented.

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Free Papers (F833)

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Surgical management of Petrous Bone Cholesteatoma and facial nerve function restoration

Presenting Author: **Wei ju Han**

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Learning Objectives:

Objective: To analyze the clinical manifestations, classification, surgical approaches of Petrous Bone cholesteatoma(PBC) and restoration of facial nerve function.

Methods: From 2000 to 2014, 91 cases of petrous bone cholesteatoma underwent operations in the Chinese PLA general hospital. Clinical, audiological, and radiological findings, surgical approach with respect to the classification and facial nerve function were analyzed retrospectively.

Results: The most common symptoms were hearing loss and FN paralysis. All patients had petrous bone erosion with high resolution temporal bone CT scan. Out of the 91 PBC cases, 45 (45/91, 49.45%) were supralabyrinthine, 7(7/91, 7.69%) were infralabyrinthine, 12(12/91, 13.19%) were infralabyrinthine-apical, and 27(27/91, 29.67%) were massive with respect to Sanna's classification. All patients were radically removed the lesion. And 5 patients underwent transmastoid approach, 41 patients underwent middle fossa approach, 34 patients were performed by translabyrinthine approach, 10 patients were performed by combined transmastoid and middle fossa approach, one patient was performed by combined translabyrinthine and sphenoid sinus approach. The most common affected section of facial nerve is labyrinth segment. Facial nerve decompression, primary end-to-end anastomosis, great auricular nerve graft and nerve substitution of facial-hypoglossal anastomosis were applied to restore the facial nerve function.

Conclusions: The most common symptoms of Petrous bone cholesteatoma were hearing loss and FN paralysis. The high resolution temporal bone CT scan has important value in

finding PBC. The classification of PBC is fundamental to choose the appropriate surgical approach, and middle fossa approach is most common approach. Radical removal lesions should be prioritized over hearing preservation. Restoration of facial nerve (FN) function is achievable by reanimation procedures.

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Primary tumors of the facial nerve misdiagnosed many years prior: What is the appropriate treatment?

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Learning Objectives: This paper was to determine the characteristics of facial nerve primary tumors misdiagnosed as tumor-free conditions many years prior, and to identify appropriate treatments. The cases of five Chinese patients with misdiagnosed primary tumors of the facial nerve were reviewed; in each case, the condition had been misdiagnosed more than 8 years prior. All patients presented with progressive or complete facial paralysis and hearing loss, with or without vertigo. We reviewed pre- and post-operative images (including CT scans of the temporal bone) and MRI data. After review, all tumors were completely resected using the translabyrinthine or transmastoid approach and were confirmed to be primary tumors of the facial nerve. All tumors were totally resected. Facial-hypoglossal nerve anastomosis failed in one patient whom we sought to manage in two stages, because fibrosis developed at the end of the facial nerve. One patient accepted two-stage facial-hypoglossal nerve anastomosis and patient status improved to House-Brackmann (H-B) grade V from H-B grade VI. The other three patients chose not to undergo reconstruction. All patients recovered well, with no other complications evident after follow-up periods of 0.5–3 years. Unusual primary tumors of the facial nerve should be considered in patients with progressive facial paralysis, especially if this is accompanied by hearing loss or vertigo. Misdiagnosis creates operative difficulties, diminishes the chance of facial nerve reconstruction, and increases the likelihood of poor reconstructive outcomes.

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Bone conduction hearing devices in single sided deafness (R834)

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Baha Attract System: 6-month results of a multicentre, open, prospective clinical investigation

Presenting Author: **Myrthe Hol**