

2) Hearing loss (13/14, 92.86%) was the most common complain. Finding methods included hearing test and CT scan (11/14, 78.57%), tympanotomy (2/14, 14.28%) and otoscopic examination(1/14,7.14%).

3) The preoperative Air-Bone conduction threshold Gap (ABG) was  $40.46 \pm 8.86$  dB. According to the course of disease, patients with CC were divided into two groups (A 6/14, B 8/14). There was no significant difference in pre-operative ABGs ( $38.10 \pm 7.43$  dB &  $42.09 \pm 9.96$  dB,  $P = 0.427$ ).

4) According to Potts's stage among A, B groups( $P = 0.043$ ).

5) Modified canal wall up mastoidectomy was the preferred procedure and 11/14 (78.57%) patients had this surgery done. In 6 patients followed up, the difference between pre-ABG and post-ABG( $36.26 \pm 5.56$  dB &  $21.70 \pm 3.80$  dB,  $P = 0.004$ ) was significant.

*Conclusion:* CC of middle ear in children happened more in boys than in girls. Hearing loss was the most common complaint. The shorter was the course of disease, the less damage of the structure of middle ear would be. Hearing test, CT, tympanotomy and otoscopic examination were usually used for diagnosis.

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### Bony Meatoplasty with Cartilage Reconstruction for External Auditory Canal Cholesteatoma: A Minimal Invasive Approach

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*Learning Objectives:*

*Objective:* To assess the outcome and advantage of bony meatoplasty with cartilage reconstruction (BMCR) for stage IV(M) external auditory canal cholesteatoma (EACC) with specific invasion in mastoid cavity.

*Methods:* Retrospective review of six cases of stage IV(M) EACC. Three cases followed by traditional canal-wall-down tympano-mastoidectomy. The other three underwent cartilage reconstruction of bony meatoplasty without radical mastoidectomy.

*Results and Conclusion:* The preoperative symptoms of all six patients were otalgia, ear fullness and hearing loss. All HRCT demonstrated external auditory canal (EAC) lesions invasion into mastoid cavity. The follow up was between 21 months to 54 months and no recurrence occurred on any of the six patients. It was observed that the patients underwent bony meatoplasty with cartilage reconstruction could also achieve the result of eradicate the disease process. Moreover, compared with the traditional radical operation, BMCR was a minimal invasive approach that maintained the normal structure of EAC and shortened the

healing time. The patients underwent BMCR also demonstrated better hearing and quality of life.

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### Influence of cystic tumor degeneration on management strategy in vestibular schwannoma

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*Learning Objectives:*

*Objective:* In this study, we focused on the influence of cystic tumor degeneration on management strategy of vestibular schwannoma.

*Methods:* The patients with vestibular schwannomawhowere operated at our center from 2006 January to 2013 December were retrospectively analyzed. There were 96 patients having sporadic cystic vestibular schwannomas, recognized by the presence of cystic components both on the preoperative magnetic resonance imaging and intraoperatively, were included. And 96 random cases with solid vestibular schwannomas were used as a control group. The clinical, operative feature and surgical outcomes were reported.

*Results:* Cystic vestibular schwannomas are associated with rapid growth, worse hearing level (94.8% of patients with hearing level in class C or D) and more frequent onsets of sudden hearing loss than solid tumor. The longterm good facial nerve function rate in cystic tumor is worse than that in solid tumor because of strong adhesion between tumor capsule and facial nerve (30.2% vs 44.8%,  $p = 0.037$ ). There was no significant difference in complications, mortality and recurrence.

*Conclusion:* Surgical resection should be the prefer management strategy for cystic vestibular schwannomas. Physician should inform patient with cystic tumor. In case of difficult dissection in peripheral thin wall cystic tumor, near total tumor resection is suggested for protection of facial nerve function and quality of life.

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### Hearing restoration for adults with vestibular schwannoma in the only-hearing ear: ipsilateral, contralateral or bilateral cochlear implantation?

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