

cholesteatomatous ears are still obscure. Herewith, we aimed to investigate the possible etio-pathogenesis of facial paralysis in our cholesteatoma cases.

**Material and Methods:** We retrospectively reviewed the charts of 5 facial nerve paralysis cases that were connected to co-existing chronic otitis media with cholesteatoma and compare our findings with reported case series in literature. The duration and degree of facial paralysis, temporal bone CT findings including the size of the mastoids, dehiscence of the fallopian canal and other accompanying radiological abnormalities such as semicircular canal dehiscence, and intraoperative findings were noted.

**Results:** In the years of 2014–2015 we admitted 156 primary of recurring cases of middle ear cholesteatoma in our clinic, 5 (3.2%) of which also had associated facial paralysis. This percentage was comparable to those of reported series. Of those patients, 2 of whom had already been operated with canal wall-down (CWD) technique years ago for cholesteatoma that recurred. According to House-Brackmann (H-B) classification, one patient had grade 5, one patient grade 4, two patients grade 3 and one patient grade 2 paralyses. All three previously unoperated cases had relatively smaller mastoids and lateral semicircular canal (LSSC) dehiscence, detected either on CT and/or perioperatively. Fallopian canal dehiscences were in tympanic segment in 3 and in mastoid segment in 2 of the patients. All patients were operated with CWD technique as to include facial canal decompression. All but one paralyses were regressed to either HB-1 (3 cases) or HB-0 (1 case) grades postoperatively.

**Discussion and Conclusion:** It appears that previously existing facial canal dehiscence and small mastoids predisposes both facial canal and LSSC erosion in untreated chronic otitis media with cholesteatoma as to result in facial nerve palsy.

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### Randomized clinical trial for partial canal wall preserved masto tympanoplasty

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#### Learning Objectives:

**Objective:** To study and evaluate the outcome of partial canal wall preserved masto tympanoplasty (PCM) for chronic otitis media with cholesteatoma and/or granulation tissue.

**Methods:** Thirty-nine patients were randomly divided into two groups. 20 patients underwent PCM, 19 patients underwent canal wall down masto tympanoplasty (CWD). All of the patients had a follow-up period of 5 years.

**Results:** All the patients in the two groups underwent the operation successfully and no intraoperative or postoperative complications were found. The mean time of drying of cavity was 6 weeks (4–8 weeks) in the PCM group, while it was 8 weeks (6–10 weeks) in the CWD group. The cavity in the PCM group were near normal or slightly larger than the external auditory canal, and the tympanic flaccid part slightly wider than normal, patients could able to wear traditional hearing aids. The patients need cavity cleaning less than 1 times a year in the PCM group and 3–4 times a year in the CWD group. The surgery cavity volume was  $1.4 + 0.2$  ml in the PCM group and  $2.6 + 1.1$  ml in the CWD group ( $P < 0.05$ ), the difference was statistically significant. There were 8 patients (40%) improved hearing level (threshold improved  $> 10$  dB) 5 years after operation in the PCM group and 6 patients (32%) in the CWD group, no statistically significant difference. 1 patient (5%) developed a recurrent cholesteatoma which was located in the attic and 4 patients (20%) developed retraction pockets in the attic in the PCM group, while 3 patients (15.8%) developed cavity problem that the epithelial accumulation were not easy to clean in the CWD group, no statistically significant difference.

**Conclusion:** With PCM technique, cholesteatoma could be completely and safely removed from the middle ear, and patients had near normal postoperative external auditory canal. Therefore, PCM was a reasonable choice for the surgery of otitis media with cholesteatoma and/or granulation tissue.

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### Ossicular Anomaly and Endolymphatic Hydrops as Risk Factors for Complications after Ossiculoplasty

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#### Learning Objectives:

We report a case of endolymphatic hydrops with an ossicular anomaly, in which a hearing test showed fluctuating mixed hearing loss. A 42-year-old man with hearing impairment had experienced varying ear symptoms on his right side since elementary school. Evaluation by computed tomography showed an ossicular anomaly, and magnetic resonance imaging revealed endolymphatic hydrops in the symptomatic ear. Ossiculoplasty or stapes surgery is considered in patients with conductive hearing loss; however, the existence of endolymphatic hydrops is a risk factor for surgical complications. Preoperative magnetic resonance imaging examination may be beneficial when evaluating inner ear conditions such as ossicular anomalies, especially in cases accompanied by fluctuating hearing loss.