

are still under-utilized, even in those for whom BAHA is the only hearing solution.

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Diagnostic Dilemmas of CSOM (R766)

ID: 766.1

Diagnosis and Treatment Strategy of Necrotizing Otitis Externa

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Learning Objectives: Although necrotizing otitis externa is life-threatening disease, it is difficult to be diagnosed and treated. Several points for diagnosis and the results of treatment would be reported.

Necrotizing otitis externa is osteomyelitis of skull base originated from the floor of external auditory canal. Most of them are optimizing infection, mainly DM. Main pathogen is *Pseudomonas Aeruginosa*. Although clinical features are clear, it is difficult to reach a correct diagnosis. Symptoms are sometimes masked by anti-biotics and analgesic drug. Severe pain, patient background such as DM, and granulation formation could be clue for suspicion. Both CT and MRI are useful for diagnosis and estimation for the extent of disease. Biopsy leads to definite diagnosis. First line of treatment is conservative approach. Appropriate antibiotics should be chosen and patient background disease would be controlled. Surgical intervention is useful when well-pneumatized mastoid is infected.

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Diagnostic Dilemmas of CSOM (R766)

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Pathogenesis and diagnosis of Otitis media with ANCA-associated vasculitis (OMAAV)

Presenting Author: **Naohiro Yoshida**

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Learning Objectives: Antineutrophil cytoplasmic antibody (ANCA)-associated vasculitis (AAV) is histologically characterized by systemic necrotizing vasculitis and is clinically classified into two phases, systemic or localized. Recently, otological symptoms such as otitis media and hearing loss, not previously often associated with AAV, have been reported in AAV cases. Delayed diagnosis of AAV occasionally leads to progression to the irreversible phase; therefore, diagnosis at the early-localized stage is important for treating AAV. In this session, the current understanding of this newly proposed concept of OMAAV is discussed.

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Nationwide survey (total 235 cases) performed between December 2013 and February 2014 by the Japan otological society presented the following features: 1) otitis media following sudden progressive hearing loss almost in one month; 2) intractable otitis media not effected by antibiotics and tympanic tube insertion; 3) mostly PR3- and/or MPO-ANCA positive but 16% showed both ANCAs-negative; 4) occasionally clinical complications such as facial palsy (36%) or hypertrophic pachymeningitis (28%); 5) tympanic membrane showing a dull appearance similar to OME and vessel dilatation of tympanic membrane ‘OME type’, otitis media with granulation ‘OMG type’, or normal appearance only with sensorineural hearing loss; 6) effectiveness of corticosteroid and immunosuppressive therapy using cyclophosphamide or methotrexate. By analysis of these clinical features, four factors such as facial palsy, hypertrophic pachymeningitis, both ANCAs-negative phenotype, and disease relapse were related to an unfavorable clinical course for patient’s hearing and prognosis. Delayed diagnosis of AAV occasionally leads to progression to the irreversible phase; therefore, diagnosis at the early-localized stage is important for treating AAV.

In this session, the current understanding of this newly proposed concept of OMAAV is discussed.

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Diagnostic Dilemmas of CSOM (R766)

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Clinical characteristics and diagnostic criteria of eosinophilic otitis media

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Learning Objectives:

Introduction: Eosinophilic otitis media (EOM) is an intractable otitis media characterized by the presence of a highly viscous yellow effusion containing eosinophils. It mainly occurs in patients with bronchial asthma and is resistant to conventional treatments for otitis media.

Methods: We reviewed 138 patients with EOM and 134 age-matched patients with common type of otitis media to analyze their clinical characteristics and to make diagnostic criteria of EOM.

Results: EOM predominantly affects females and occurs most often in patients in their 50s. EOM is often complicated by rhinosinusitis and nasal polyposis, which is called

eosinophilic rhinosinusitis. High tone loss is more frequently found and more severe in EOM patients than in COM control patients. According to the clinical data, we proposed the diagnostic criteria of EOM. Major criterion is that otitis media with effusion or chronic otitis media with eosinophil dominant effusion. It is necessary to prove the accumulation of eosinophils in the effusion histologically or cytologically. Minor criteria are as follows; 1) highly viscous middle ear effusion, 2) resistance to conventional treatment for otitis media, 3) association with bronchial asthma, 4) association with nasal polyposis. The definite case is defined as positive for major and two or more minor criteria. However, eosinophilic granulomatous polyangitis (Churg-Strauss syndrome) and hyper eosinophilic syndrome are excluded.

Discussion and conclusion: Our basic treatment for EOM is the intratympanic instillation of triamcinolone. Most of the patients have been well-controlled by this treatment. We further discussed the risk factors of severity and inner ear damage in patients with EOM. Patients with ear symptoms should have the proper diagnosis of EOM using the proposed diagnostic criteria, and then can receive adequate treatment, resulting in prevention of deterioration of hearing and quality of life.

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Diagnostic Dilemmas of CSOM (R766)

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The Variable Clinical Presentation of Tuberculosis Otitis Media and the Importance of Early Detection

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Learning Objectives:

Introduction: Tuberculosis (TB) is a rare cause of otitis media. This study aims to increase awareness on the clinical presentation of TB otitis media and illustrate how early detection affects treatment outcome.

Methods: Chart review of 12 patients (13 ears) from a tertiary hospital in Manila, Philippines, seen from 2004 to 2009. Clinical predictors of the disease were summarized. Clinical, radiologic, and audiometric outcomes after treatment were compared between treatment groups.

Results: The 5 otoscopic presentations were multiple perforations, single perforation with refractory otorrhea and

exuberant granulation tissue formation, single perforation with minimal otorrhea and no granulation tissue formation, intact tympanic membrane with middle ear effusion, and intact tympanic membrane with tumorlike tissue in the middle ear. Clinical predictors of the disease were history of pulmonary TB, work-related contamination of the infection, positive purified protein derivative test, positive chest radiographic finding and intraoperative granulation tissue with cheesy material, and temporal bone computed tomographic scan findings. Patients who had no middle ear surgery showed significantly better clinical, radiologic, and audiometric outcomes than those who were diagnosed late and had more complicated surgical procedure.

Conclusion: The clinical presentation of TB otitis media is variable. Early detection of the early forms entail less surgical intervention and favors better treatment results.

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Useful tips in ear surgery (V767)

ID: 767.1

Tympanoplasty using Medio-Lateral Graft and Anterior Canal Skin for Anterior or Subtotal Tympanic Membrane Perforation

Presenting Author: **Timothy Jung**

Timothy Jung

Loma Linda University School of Medicine

Learning Objectives:

Introduction: Reconstruction of anterior or subtotal tympanic membrane perforation is challenging. The objectives of this study are to describe a medio-lateral graft tympanoplasty technique and use of anterior canal skin for reconstruction of anterior or subtotal tympanic membrane (TM) perforation and to analyze 20 years of experience using this graft method.

Method: This is a retrospective study of 400 patients who underwent the medio-lateral graft tympanoplasty for reconstruction of anterior or subtotal TM perforation during the past twenty years. The main outcome measure was intact TM. In this method temporalis fascia or perichondrium is grafted medial to posterior TM, malleus handle and posterior half of the perforation and lateral to anterior half of the de-epithelialized TM perforation up to the annulus. Anterior canal skin is rotated as superiorly based flap to cover fascia graft and TM perforation as a second layer closure. Outcome was considered successful if TM is intact.

Results: There were twelve failures (97% success rate) due to a postoperative infection, anterior blunting, or recurrent cholesteatoma.

Conclusion: The medio-lateral graft method is superior to the traditional medial or lateral graft technique for the large anterior or subtotal TM perforation taking advantage of both medial and lateral grafting method while avoiding their pitfalls.