**MIDDLE EAR EFFUSION IN TREATED NASOPHARYNGEAL CARCINOMA PATIENTS. TO TUBE OR NOT TO TUBE?**

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**Introduction**

Advances in concurrent chemotherapy and radiotherapy (RT) have vastly improved the disease survival of NPC patients. However, these patients often have to grapple with long-term side effects, one of which being radiation-induced otitis media with effusion (OME). The hearing loss is compounded by sensorineural hearing toxicity of platinum-based chemotherapy.

The management of NPC-related OME is controversial, with myringotomy and tube insertion (MT) not being favoured due to its proliferating complications. Being radiation-induced, the usual conservative treatment of post-inflammatory OME is invariably unsuccessful. Hearing aids, though variably successful in alleviating hearing loss, are costly, and do not alleviate aural discomfort.

Current research has conflicting views about MT insertion for NPC patients post-radiotherapy. Complications of tympanostomy tubes include eardrum perforation and persistent otitis media (OM). However, long-term benefits of reduction in aural fullness, hearing improvements and reduction in follow-up consultations are some factors that support the use of tympanostomy tubes.

In this study, we aim to investigate the incidence of NPC-related OME and predisposing factors, as well as audit the efficacy and safety of myringotomy and tube insertion in NPC-related OME.

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**Methods**

Retrospective cohort study of NPC patients treated in the National University Hospital, Singapore from 2011 to 2016. Incidence of NPC-related OME and degree of hearing loss were analysed. Patients who underwent tympanostomy tube insertion were reviewed and outcomes and complications were recorded and analysed.

**Results**

Incidence of OME (Ears)

184 out of 1020 ears (18.4%)

Outcomes of MT Insertion

- 1 Resolution of OME
- 2 Dry persistent perforation
- 3 Repeated tube insertion (average of 3 tubes/ear)
- 4 Tubas in situ (dry)

Recurrence of OME after MT

- 10 Recurrence of OME

Spontaneous Resolution without MT

- 14 Ears with MT Inserted

- After an average of 100 days ± 91 s.d.

**Conclusions**

NPC-related OME occurs in 31.2% of patients (21.0% of ears). 18.4% (15.2% of ears) resolve spontaneously. NPC-related OME tends to recur after tube extrusion, necessitating repeated MT.

There is a low risk of troubling otitis media after MT insertion. Subjectively, all patients improve symptomatically and a majority continue to request for MT insertion when tubes dislodge. More studies with patient-reported outcomes are required to better investigate the role of MT insertion in this hard-to-treat condition.

**References**


7. Twu MA, et al. Middle ear effusion in treated nasopharyngeal carcinoma patients. Head & Neck Surgery, National University Hospital, Singapore.