

An elderly man with an air-fluid level in the middle ear

Mohamad S, Mohamad I

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Authors:

Sakinah Mohamad

(Corresponding author)
MBBCh
Universiti Sains Malaysia Health
Campus, 16150 Kota Bharu,
Kelantan, Malaysia
E-mail: tr_kmkstuds03@yahoo.com

Irfan Mohamad

MD, MMed (ORL-HNS)
Universiti Sains Malaysia Health
Campus, Kelantan, Malaysia

Abstract

A 68-year-old Malay man who is a rubber tapper, presented with a large painful right-sided neck swelling for 6 months, which was gradually increasing in size and associated with odynophagia, dysphagia, hoarseness and significant weight loss. He did not complain of any ear symptoms, but on further questioning, he admitted having a 3-week history of occasional tinnitus and reduced hearing on the right ear. Other ear symptoms were negative.

On examination, there was a mildly inflamed, hard and tender 5 × 5 cm mass, which was fixed at level II, III and IV on the right side of the neck. Oral examination showed a unilateral tonsillar enlargement. An otoscopy was performed (**Figure 1**). Rinne test was negative for the right ear and positive for the left ear, and Weber test was lateralised to the right ear.



Figure 1. Otoscopic finding of the right ear

Questions

1. Describe the otoscopic finding (**Figure 1**).
2. What additional symptoms should you be looking for?
3. What is the most likely diagnosis?
4. What are the treatment options for this patient?

Answer

1. Otoscopic finding of the right ear shows an air-fluid (serous) level behind the tympanic membrane. The tympanic membrane is intact and mildly retracted with hyperaemia and the handle of malleus prominent at the periphery. The cone of light is, however, still present.
2. It is important to enquire about nasal symptoms such as epistaxis, nasal blockage, change in smell perception and

rhinorrhoea. Nasopharyngeal carcinoma (NPC) should be strongly suspected if the patient presented with neck mass, epistaxis or cranial nerve involvement accompanied by otitis media with effusion (OME).¹ OME is well-recognised as a common presentation of NPC (41%) and neck mass (49-70%). Our patient complained of right nasal blockage and occasional epistaxis.

3. Right OME secondary to Eustachian tube dysfunction caused by a nasopharyngeal tumour (**Figure 2**). The possible pathogenesis of NPC-related OME can be due to obstruction or erosion of the Eustachian tube by the tumour, destruction of the tensor veli palatinus and as an effect of radiation (for example, reduced mucociliary function of Eustachian tube, scarring of the tensor veli palatinus or Eustachian tube opening and influx of nasopharyngeal bacteria).⁵⁻⁶ Other differential diagnoses include parapharyngeal malignancy, tonsillar malignancy and parotid carcinoma.

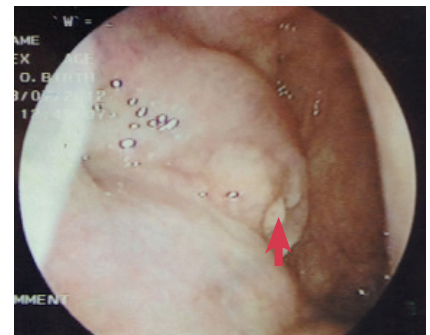


Figure 2. Nasoendoscopic finding of the right fossa of Rosenmüller

4. The treatment option for OME in NPC patients remains controversial. A stepwise approach is recommended based on the patient's symptoms: 1) observation or a hearing aid, 2) tympanostomy and aspiration, 3) repeated tympanostomy for at least 3 months and 4) myringotomy and grommet insertion if repeated tympanostomy fails.⁵ Even though grommet insertion gives immediate relief, it should not be routinely recommended especially for patients with unilateral disease and minimal ear symptoms as complications such as chronic otorrhea (49%) and persistent tympanic membrane perforation (29%) are difficult to manage.⁷
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How this paper makes a difference to general practice?

- This paper highlights that although OME is common, the family physician should be aware that it may be a presentation of NPC to prevent a delay in diagnosis.

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