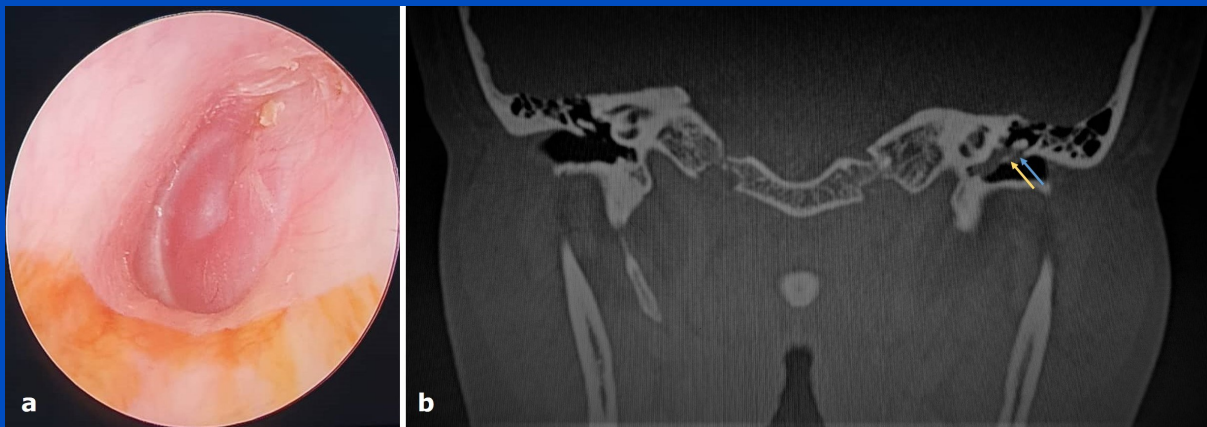


OFFICIAL PUBLICATION OF
THE MINISTRY OF HEALTH,
BRUNEI DARUSSALAM

Brunei International Medical Journal

Volume 16

26 October 2020 (9 Rabiulawal 1442H)



Brunei Int Med J. 2020;16:113-114

Brunei International Medical Journal (BIMJ)

Official Publication of the Ministry of Health, Brunei Darussalam

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Acknowledgements

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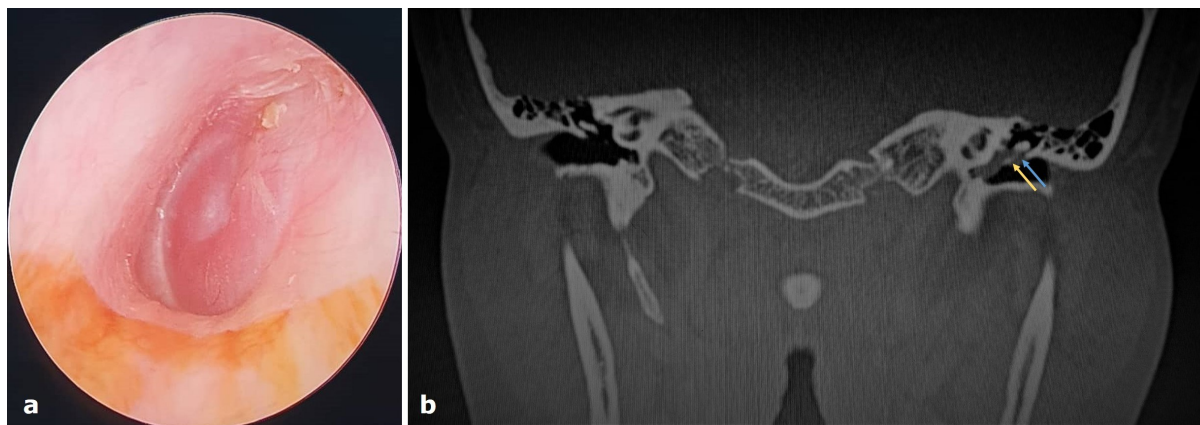


Figure 1

A previously healthy 50-year-old female presented with one-month history of left-sided aural fullness with pulsatile tinnitus. There was no obvious hearing loss, otalgia, otorrhea or otorrhagia. Recent trauma or upper respiratory tract infection was also absent. Additionally, no recurrent nasal symptom or neck swelling were mentioned. Patient denies any constitutional symptoms. Upon examination, patient appears comfortable. External ear examination was normal. Otoscopic examination revealed bulging left tympanic membrane with no discharge (Figure 1a); whereas right tympanic membrane was normal. Nasoendoscopic examination was unremarkable. Neck examination was unremarkable. Cranial nerve examination was intact. Pure tone audiometry revealed left mild conductive hearing loss and normal hearing. High-resolution computed tomography (HRCT) revealed soft tissue mass within the middle ear with evidence of erosion of ossicles (Figure 1b).

What is the diagnosis?

Answer: refer to page 114

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Contributorship statement:

Jeyasakthy Saniasiaya is the corresponding author and is responsible in planning, conducting, reporting the work.

Kuganathan Ramasamy is responsible for literature review

Funding: This study was not funded.

Acknowledgement: We would like to acknowledge all involved in writing this manuscript.

DISCLOSURE: There is no conflict of interest and consent has been obtained from parents for use of these images.

(Refer to page 113)

ANSWER: LEFT GLOMUS TYMPANICUM.

Figure 1: (a) Bulging of left tympanic membrane, (b) Coronal high-resolution computed tomography temporal revealing soft tissue mass in left middle ear (Yellow arrow) with evidence of ossicle erosion (Blue arrow showing erosion of body of incus).

Glomus tympanicum (GT) is the commonest neoplasm of middle ear.¹ GT is a part of glomus tumour and is a rare neuroendocrine tumour arising from paraganglionic cells, glomus chemoreceptors which courses along the tympanic segment of Jacobson's nerve (IXth) and Arnold's nerve (Xth) nerve located in the middle ear.² These baroreceptors serve to regulate oxygen pressure in middle ear and mastoid. Patient's classically presents with pulsatile tinnitus, hearing loss and otalgia. Other additional symptoms include aural fullness, otorrhagia, facial asymmetry.³

Hallmark of GT is identified on otoscopic examination which reveals a retrotympanic bright-red mass.⁴ Additionally, blanching of tympanic membrane can be seen with pneumatic otoscopy or on Valsalva manoeuvre (Brown sign) can be elicited.⁴ Diagnosis can be made via meticulous clinical examination. Despite that, imaging notably HRCT will delineate the tumour as well as extension of the mass. MRI with gadolinium allows soft tissue structures to be outlined as well as defining intracranial and perineural infiltration.

Surgical resection is the gold standard treatment for GT. Drawback in operating GT besides being a vascular tumour is small space within the middle ear. In our patient, endoscopic excision of tumour was performed which revealed vascular lesion arising from promontory, eroding malleus and incus and was successfully removed completely. Histo-

pathological examination of mass revealed neoplastic cells exhibiting Zellballen formation separated by thin fibrovascular septae, suggestive of glomus tympanicum (Figure 2). Patient was discharged home subsequent day with no evidence of recurrence till date.

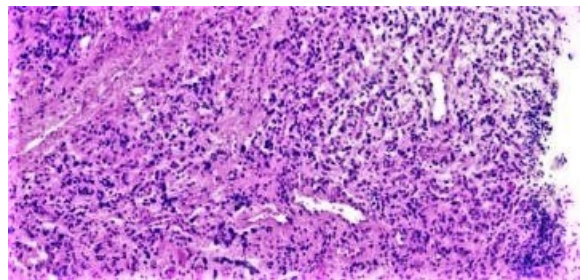


Figure 2: Hematoxylin & Eosin stain shows nests of neoplastic cells exhibiting Zellballen formation (magnification x200)

Vague presentation as unilateral aural fullness with bulging of tympanic membrane can be mistaken as middle ear effusion (MEE). Tympanotomy, done usually for MEE will lead to cataclysmic bleed in cases of misdiagnosed GT. It is thus imperative that unilateral bulging tympanic membrane in adult patient is not mistakenly diagnosed as MEE and imaging is carried out to rule out other sinister neoplasm. Overall prognosis is good with complete resection but recurrence rate of about 5.9% has been reported.⁴

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