

World Journal of *Clinical Cases*

World J Clin Cases 2022 January 7; 10(1): 1-396



MINIREVIEWS

- 1 Omicron variant (B.1.1.529) of SARS-CoV-2: Mutation, infectivity, transmission, and vaccine resistance
Ren SY, Wang WB, Gao RD, Zhou AM
- 12 Hepatitis B virus reactivation in rheumatoid arthritis
Wu YL, Ke J, Zhang BY, Zhao D
- 23 Paradoxical role of interleukin-33/suppressor of tumorigenicity 2 in colorectal carcinogenesis: Progress and therapeutic potential
Huang F, Chen WY, Ma J, He XL, Wang JW

ORIGINAL ARTICLE

Case Control Study

- 35 Changes in rheumatoid arthritis under ultrasound before and after sinomenine injection
Huang YM, Zhuang Y, Tan ZM
- 43 Benefits of multidisciplinary collaborative care team-based nursing services in treating pressure injury wounds in cerebral infarction patients
Gu YH, Wang X, Sun SS

Retrospective Study

- 51 Outcomes and complications of open, laparoscopic, and hybrid giant ventral hernia repair
Yang S, Wang MG, Nie YS, Zhao XF, Liu J
- 62 Surgical resection of intradural extramedullary tumors in the atlantoaxial spine *via* a posterior approach
Meng DH, Wang JQ, Yang KX, Chen WY, Pan C, Jiang H
- 71 Vancomycin lavage for the incidence of acute surgical site infection following primary total hip arthroplasty and total knee arthroplasty
Duan MY, Zhang HZ
- 79 Distribution of transient receptor potential vanilloid-1 channels in gastrointestinal tract of patients with morbid obesity
Atas U, Erin N, Tazegul G, Elpek GO, Yıldırım B
- 91 Value of neutrophil-lymphocyte ratio in evaluating response to percutaneous catheter drainage in patients with acute pancreatitis
Gupta P, Das GC, Bansal A, Samanta J, Mandavdhare HS, Sharma V, Naseem S, Gupta V, Yadav TD, Dutta U, Varma N, Sandhu MS, Kochhar R

- 104** Influence of overweight and obesity on the mortality of hospitalized patients with community-acquired pneumonia
Wang N, Liu BW, Ma CM, Yan Y, Su QW, Yin FZ
- 117** Minimally invasive open reduction of greater tuberosity fractures by a modified suture bridge procedure
Kong LP, Yang JJ, Wang F, Liu FX, Yang YL
- 128** Increased levels of lactate dehydrogenase and hypertension are associated with severe illness of COVID-19
Jin ZM, Shi JC, Zheng M, Chen QL, Zhou YY, Cheng F, Cai J, Jiang XG
- 136** Age, alcohol, sex, and metabolic factors as risk factors for colonic diverticulosis
Yan Y, Wu JS, Pan S
- 143** Evaluation of right-to-left shunt on contrast-enhanced transcranial Doppler in patent foramen ovale-related cryptogenic stroke: Research based on imaging
Xiao L, Yan YH, Ding YF, Liu M, Kong LJ, Hu CH, Hui PJ
- 155** Characterization of focal hypermetabolic thyroid incidentaloma: An analysis with F-18 fluorodeoxyglucose positron emission tomography/computed tomography parameters
Lee H, Chung YS, Lee JH, Lee KY, Hwang KH

Clinical Trials Study

- 166** Low-dose intralesional injection of 5-fluorouracil and triamcinolone reduces tissue resident memory T cells in chronic eczema
Wu Y, Wang GJ, He HQ, Qin HH, Shen WT, Yu Y, Zhang X, Zhou ML, Fei JB

Observational Study

- 177** Alterations in blink and masseter reflex latencies in older adults with neurocognitive disorder and/or diabetes mellitus
Bricio-Barrios JA, Rios-Bracamontes E, Rios-Silva M, Huerta M, Serrano-Moreno W, Barrios-Navarro JE, Ortiz GG, Huerta-Trujillo M, Guzmán-Esquivel J, Trujillo X
- 189** Predicting adolescent perfectionism: The role of socio-demographic traits, personal relationships, and media
Livazović G, Kuzmanović K
- 205** Novel m.4268T>C mutation in the mitochondrial tRNA^{Leu} gene is associated with hearing loss in two Chinese families
Zhao LJ, Zhang ZL, Fu Y
- 217** Superior mesenteric venous thrombosis: Endovascular management and outcomes
Alnahhal K, Toskich BB, Nussbaum S, Li Z, Erben Y, Hakaim AG, Farres H

Randomized Controlled Trial

- 227** Zinc carnosine-based modified bismuth quadruple therapy *vs* standard triple therapy for *Helicobacter pylori* eradication: A randomized controlled study
Ibrahim N, El Said H, Choukair A

CASE REPORT

- 236 Acquired coagulation dysfunction resulting from vitamin K-dependent coagulation factor deficiency associated with rheumatoid arthritis: A case report
Huang YJ, Han L, Li J, Chen C
- 242 Intraoperative thromboelastography-guided transfusion in a patient with factor XI deficiency: A case report
Guo WJ, Chen WY, Yu XR, Shen L, Huang YG
- 249 Positron emission tomography and magnetic resonance imaging combined with computed tomography in tumor volume delineation: A case report
Zhou QP, Zhao YH, Gao L
- 254 Successful response to camrelizumab in metastatic bladder cancer: A case report
Xie C, Yuan X, Chen SH, Liu ZY, Lu DL, Xu F, Chen ZQ, Zhong XM
- 260 HER2 changes to positive after neoadjuvant chemotherapy in breast cancer: A case report and literature review
Wang L, Jiang Q, He MY, Shen P
- 268 Hyper-accuracy three-dimensional reconstruction as a tool for better planning of retroperitoneal liposarcoma resection: A case report
Ye MS, Wu HK, Qin XZ, Luo F, Li Z
- 275 Recurrent postmenopausal bleeding - just endometrial disease or ovarian sex cord-stromal tumor? A case report
Wang J, Yang Q, Zhang NN, Wang DD
- 283 Complex proximal femoral fracture in a young patient followed up for 3 years: A case report
Li ZY, Cheng WD, Qi L, Yu SS, Jing JH
- 289 Bilateral Hypertrophic Olivary Degeneration after Pontine Hemorrhage: A Case Report
Zheng B, Wang J, Huang XQ, Chen Z, Gu GF, Luo XJ
- 296 Clinical characteristics and outcomes of primary intracranial alveolar soft-part sarcoma: A case report
Chen JY, Cen B, Hu F, Qiu Y, Xiao GM, Zhou JG, Zhang FC
- 304 Removal of laparoscopic cerclage stitches *via* laparotomy and rivanol-induced labour: A case report and literature review
Na XN, Cai BS
- 309 Cerebral venous sinus thrombosis in pregnancy: A case report
Zhou B, Huang SS, Huang C, Liu SY
- 316 Eustachian tube teratoma: A case report
Li JY, Sun LX, Hu N, Song GS, Dou WQ, Gong RZ, Li CT

- 323** Protein-losing enteropathy caused by a jejunal ulcer after an internal hernia in Petersen's space: A case report
Yasuda T, Sakurazawa N, Kuge K, Omori J, Arai H, Kakinuma D, Watanabe M, Suzuki H, Iwakiri K, Yoshida H
- 331** Lunate dislocation with avulsed triquetral fracture: A case report
Li LY, Lin CJ, Ko CY
- 338** Clinical manifestations and prenatal diagnosis of Ullrich congenital muscular dystrophy: A case report
Hu J, Chen YH, Fang X, Zhou Y, Chen F
- 345** Diagnosis and guidance of treatment of breast cancer cutaneous metastases by multiple needle biopsy: A case report
Li ZH, Wang F, Zhang P, Xue P, Zhu SJ
- 353** Test of incremental respiratory endurance as home-based, stand-alone therapy in chronic obstructive pulmonary disease: A case report
Dosbaba F, Hartman M, Batalik L, Brat K, Plutinsky M, Hnatiak J, Formiga MF, Cahalin LP
- 361** Diagnostic and surgical challenges of progressive neck and upper back painless masses in Madelung's disease: A case report and review of literature
Yan YJ, Zhou SQ, Li CQ, Ruan Y
- 371** Suspected cerebrovascular air embolism during endoscopic esophageal varices ligation under sedation with fatal outcome: A case report
Zhang CMJ, Wang X
- 381** An atypical primary malignant melanoma arising from the cervical nerve root: A case report and review of literature
Shi YF, Chen YQ, Chen HF, Hu X
- 388** Epidural blood patch for spontaneous intracranial hypotension with subdural hematoma: A case report and review of literature
Choi SH, Lee YY, Kim WJ

ABOUT COVER

Editorial Board Member of *World Journal of Clinical Cases*, Ravi Kant, MD, Associate Professor, Division of Endocrinology, Diabetes and Metabolism, Medical University of South Carolina/Anmed Campus, Anderson, SC 29621, United States. rkant82@hotmail.com

AIMS AND SCOPE

The primary aim of *World Journal of Clinical Cases* (WJCC, *World J Clin Cases*) is to provide scholars and readers from various fields of clinical medicine with a platform to publish high-quality clinical research articles and communicate their research findings online.

WJCC mainly publishes articles reporting research results and findings obtained in the field of clinical medicine and covering a wide range of topics, including case control studies, retrospective cohort studies, retrospective studies, clinical trials studies, observational studies, prospective studies, randomized controlled trials, randomized clinical trials, systematic reviews, meta-analysis, and case reports.

INDEXING/ABSTRACTING

The WJCC is now indexed in Science Citation Index Expanded (also known as SciSearch®), Journal Citation Reports/Science Edition, Scopus, PubMed, and PubMed Central. The 2021 Edition of Journal Citation Reports® cites the 2020 impact factor (IF) for WJCC as 1.337; IF without journal self cites: 1.301; 5-year IF: 1.742; Journal Citation Indicator: 0.33; Ranking: 119 among 169 journals in medicine, general and internal; and Quartile category: Q3. The WJCC's CiteScore for 2020 is 0.8 and Scopus CiteScore rank 2020: General Medicine is 493/793.

RESPONSIBLE EDITORS FOR THIS ISSUE

Production Editor: Lin-YuTong Wang; Production Department Director: Xiang Li; Editorial Office Director: Jin-Lai Wang.

NAME OF JOURNAL

World Journal of Clinical Cases

ISSN

ISSN 2307-8960 (online)

LAUNCH DATE

April 16, 2013

FREQUENCY

Thrice Monthly

EDITORS-IN-CHIEF

Bao-Gan Peng, Jerzy Tadeusz Chudek, George Kontogeorgos, Maurizio Serati, Ja Hyeon Ku

EDITORIAL BOARD MEMBERS

<https://www.wjgnet.com/2307-8960/editorialboard.htm>

PUBLICATION DATE

January 7, 2022

COPYRIGHT

© 2022 Baishideng Publishing Group Inc

INSTRUCTIONS TO AUTHORS

<https://www.wjgnet.com/bpg/gerinfo/204>

GUIDELINES FOR ETHICS DOCUMENTS

<https://www.wjgnet.com/bpg/gerinfo/287>

GUIDELINES FOR NON-NATIVE SPEAKERS OF ENGLISH

<https://www.wjgnet.com/bpg/gerinfo/240>

PUBLICATION ETHICS

<https://www.wjgnet.com/bpg/gerinfo/288>

PUBLICATION MISCONDUCT

<https://www.wjgnet.com/bpg/gerinfo/208>

ARTICLE PROCESSING CHARGE

<https://www.wjgnet.com/bpg/gerinfo/242>

STEPS FOR SUBMITTING MANUSCRIPTS

<https://www.wjgnet.com/bpg/gerinfo/239>

ONLINE SUBMISSION

<https://www.f6publishing.com>

Eustachian tube teratoma: A case report

Jin-Ye Li, Li-Xin Sun, Na Hu, Ge-Sheng Song, Wei-Qiang Dou, Ruo-Zhen Gong, Chuan-Ting Li

ORCID number: Jin-Ye Li 0000-0002-4359-2806; Li-Xin Sun 0000-0002-8831-6012; Na Hu 0000-0003-4254-1449; Ge-Sheng Song 0000-0001-5206-6608; Wei-Qiang Dou 0000-0003-0056-2014; Ruo-Zhen Gong 0000-0002-4359-2806; Chuan-Ting Li 0000-0002-0860-7996.

Author contributions: Li JY, Sun LX, Song GS and Dou WQ reviewed the literature and contributed to manuscript drafting; Hu N and Gong RZ performed the computed tomography and magnetic resonance imaging, and contributed to manuscript drafting; Li CT was responsible for revision of the manuscript regarding important intellectual content; All authors issued final approval for the version to be submitted.

Informed consent statement:

Informed written consent was obtained from the patient for publication of this report and any accompanying images.

Conflict-of-interest statement: The authors declare having no conflicts of interest.

CARE Checklist (2016) statement:

The authors have read the CARE Checklist (2016), and the manuscript was prepared and revised according to the CARE Checklist (2016).

Supported by Shandong Province Key Research and Development

Jin-Ye Li, Li-Xin Sun, Na Hu, Department of Radiology, Shandong Provincial ENT Hospital, Cheeloo College of Medicine, Shandong University, Jinan 250021, Shandong Province, China

Ge-Sheng Song, Department of Radiology, Shandong Province Qianfoshan Hospital, Jinan 250021, Shandong Province, China

Wei-Qiang Dou, GE Healthcare, MR Research China, Beijing 100000, China

Ruo-Zhen Gong, Gong Ruozhen Innovation Studio, Shandong Provincial ENT Hospital, Cheeloo College of Medicine, Shandong University, Jinan 250021, Shandong Province, China

Chuan-Ting Li, Department of Radiology, Shandong Province Hospital, Cheeloo College of Medicine, Shandong University, Jinan 250021, Shandong Province, China

Corresponding author: Chuan-Ting Li, MD, PhD, Professor, Department of Radiology, Shandong Province Hospital, Cheeloo College of Medicine, Shandong University, No. 324 Jingwu Weiqi Road, Jinan 250021, Shandong Province, China. lichuanting1@126.com

Abstract

BACKGROUND

Mature teratoma composed of all three basic germ cell layers of the head and neck is a rare disease. Teratomas involving the temporal bone are particularly scarce.

CASE SUMMARY

A 48-year-old male patient with a history of chronic otitis of the left ear from infancy, for which he had been operated on twice, was referred to our hospital for chronic otitis, cholesteatoma and a middle ear mass. Computed tomography (CT) scan and magnetic resonance imaging (MRI) revealed a eustachian tube teratoma, in which the anterior lower part and posterior upper part were connected by a thin membranaceous tissue. The mass was removed completely under general anesthesia by mastoidectomy. As of last follow-up (2 years post-surgery), the disease had not relapsed.

CONCLUSION

Pre-operative CT and MRI are necessary for eustachian tube teratoma. Complete surgical resection provided excellent prognosis.

Key Words: Eustachian tube; Teratoma; Chronic otitis; Computed tomography; Magnetic resonance imaging; Case report

©The Author(s) 2022. Published by Baishideng Publishing Group Inc. All rights reserved.

Program Project, No.

2018GSF118041; and Shandong Medical and Health Science and Technology Development Plan, No. 2017WS740.

Country/Territory of origin: China

Specialty type:

Otorhinolaryngology

Provenance and peer review:

Unsolicited article; Externally peer reviewed.

Peer-review model: Single blind

Peer-review report's scientific quality classification

Grade A (Excellent): 0

Grade B (Very good): B

Grade C (Good): 0

Grade D (Fair): 0

Grade E (Poor): 0

Open-Access: This article is an open-access article that was selected by an in-house editor and fully peer-reviewed by external reviewers. It is distributed in accordance with the Creative Commons Attribution NonCommercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited and the use is non-commercial. See: <http://creativecommons.org/licenses/by-nc/4.0/>

Received: August 11, 2021

Peer-review started: August 11, 2021

First decision: October 20, 2021

Revised: October 23, 2021

Accepted: November 30, 2021

Article in press: November 30, 2021

Published online: January 7, 2022

P-Reviewer: Corvino A

S-Editor: Gong ZM

L-Editor: A

P-Editor: Gong ZM



Core Tip: Mature teratoma of the head and neck is a rare disease. We present a case of eustachian tube teratoma, in which the anterior lower part and posterior upper part were connected by a thin membranaceous tissue, in a 48-year-old male patient who had a history of chronic otitis of the left ear from infancy and had already been operated on twice. When a long history of chronic otitis is encountered, combined with polyps in the tympanum and/or external auditory canal, a combination of computed tomography and magnetic resonance imaging is necessary pre-operation.

Citation: Li JY, Sun LX, Hu N, Song GS, Dou WQ, Gong RZ, Li CT. Eustachian tube teratoma: A case report. *World J Clin Cases* 2022; 10(1): 316-322

URL: <https://www.wjgnet.com/2307-8960/full/v10/i1/316.htm>

DOI: <https://dx.doi.org/10.12998/wjcc.v10.i1.316>

INTRODUCTION

Teratomas of the head and neck account for 5%-15% of all teratomas and principally involve the nasopharynx and neck[1]. Reports of teratomas involving the temporal bone are scarce[2,3]. Herein, we present a case of mature teratoma of the eustachian tube (ET) in an adult male with a history of chronic otitis of the left ear from infancy.

CASE PRESENTATION

Chief complaints

A 48-year-old man was referred to our hospital for chronic otitis, cholesteatoma and a middle ear mass.

History of present illness

The patient had experienced chronic otitis of the left ear from infancy and underwent surgery for cholesteatoma in the tympanum at another hospital. However, his clinical symptoms had persisted. His conscious hearing was poor, and he suffered from earache, ear boredom, headache and dizziness.

History of past illness

The patient had no significant past medical history.

Personal and family history

The patient's family history was unremarkable.

Physical examination

Otoscopic examination demonstrated a large amount of pus in the left external auditory canal, a fleshy polyp present at a deeper site, and mucosal edema in the previously operated area (Figure 1). Audiometric assessment confirmed a severe conductive hearing loss; hearing threshold was 80 dB and auditory brainstem response was 70 dB on the affected side. Nasopharyngoscopy showed that the orifice of the left ET opened well.

Laboratory examinations

The laboratory examination was otherwise unremarkable. The laboratory assessment included routine blood tests. Tests for C-reactive proteins and viral hepatitis markers were negative. Glucose and serum insulin levels were normal.

Imaging examinations

The unenhanced computed tomography (CT) of the temporal bone showed some changes, including a well-circumscribed, mixed density tumor with a fat density area in the ET; the lesion extended down to the left part of the tympanum and external auditory canal (Figure 2), without ossicular chain, which had resulted from the mastoidectomy. The T1- and T2-weighted magnetic resonance imaging (MRI) in the

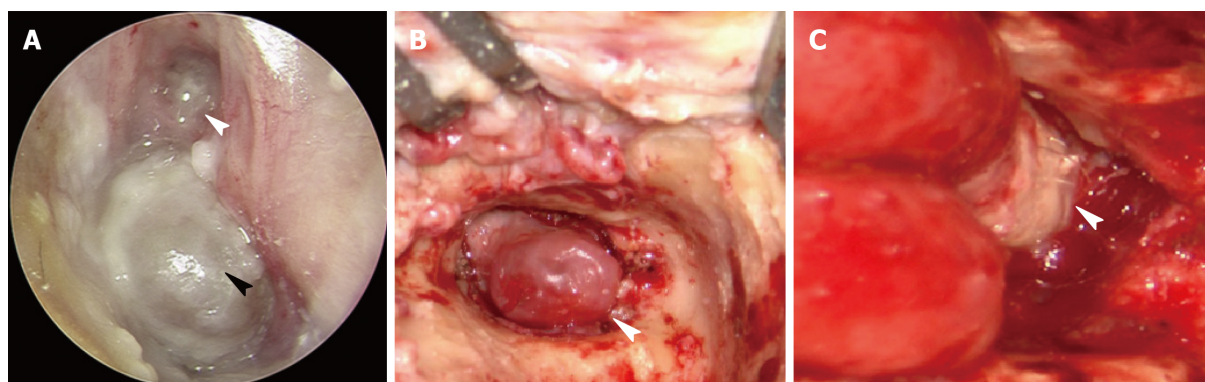


Figure 1 Endoscopic appearance and intraoperative appearance of the patient's teratoma. A: Otoscopic examination demonstrated a large amount of pus in the left external auditory canal (white arrowhead) and a fleshy polyp at a deeper site (black arrowhead); B: The part of the mass in the tympanum and external auditory canal appeared as a fleshy polyp (arrowhead); C: "Hairs" were present on the surface of the mass and cartilage was surrounded by the mass in part of the eustachian tube (arrowhead).

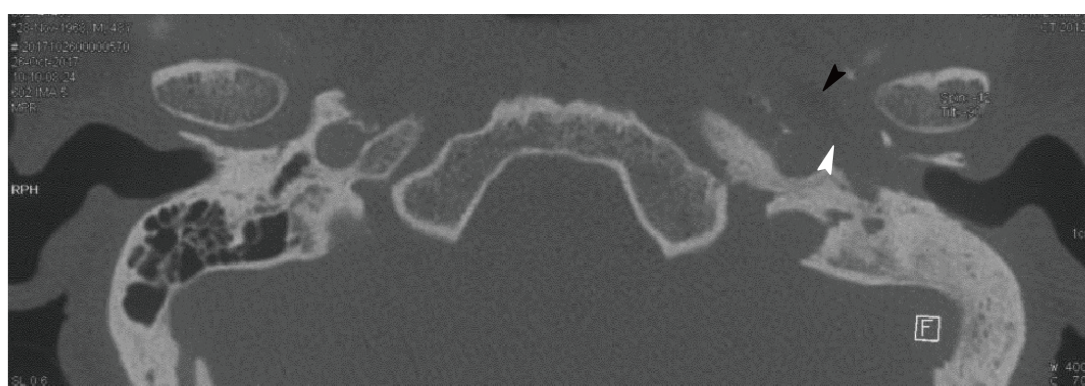


Figure 2 High-resolution computed tomography scan of the patient's temporal bone. Computed tomographic imaging showed a well-circumscribed, mixed density tumor (white arrowhead) with a fat density area (black arrowhead) located in the eustachian tube.

transverse plane showed a 3.2 cm × 1.3 cm × 2.0 cm, well-defined, homogeneous lesion with high signal intensity along the left ET. The mass showed signal intensity similar to that of the fat on all sequences and with little cartilage signal (Figure 3). The lesion extended down to the left part of the tympanum and external auditory canal, where the signal was slightly higher than the part in the ET. On fat-saturated T1- and T2-weighted sequences, the part of the mass in the ET demonstrated a decreased signal intensity, indicating that the mass was consistent with macroscopic fat. The mass was surrounded by a smooth, thick, hypointense capsule, which was enhanced slightly after contrast administration.

Pathological results

The ET diameter was expanded, to about 0.8 cm. The part of the mass in the tympanum and external auditory canal was classified as a fleshy polyp. However, "hairs" were visible on the surface of the mass and cartilage surrounded by the mass could be seen in the ET area (Figure 1). The mass, in which the anterior lower part and posterior upper part were connected by a thin membranaceous tissue, was in the ET. It was tightly bonded to the former ET wall and could not be removed *in toto*, so serial partial excision was performed. The resulting cavity (composed of the tympanum and external auditory canal) was then resolved by filling with abdominal fat.

On gross examination, the resected mass appeared as a cluster of irregular, soft, grey-colored tissue. Microscopically, a photomicrograph of the mass revealed characteristics of keratinized squamous epithelium, adipose, sweat gland and mature skeletal muscle tissues. Photomicrographs of the areas including the tympanum and external auditory canal revealed squamous epithelial mucosal polyps (Figure 4).

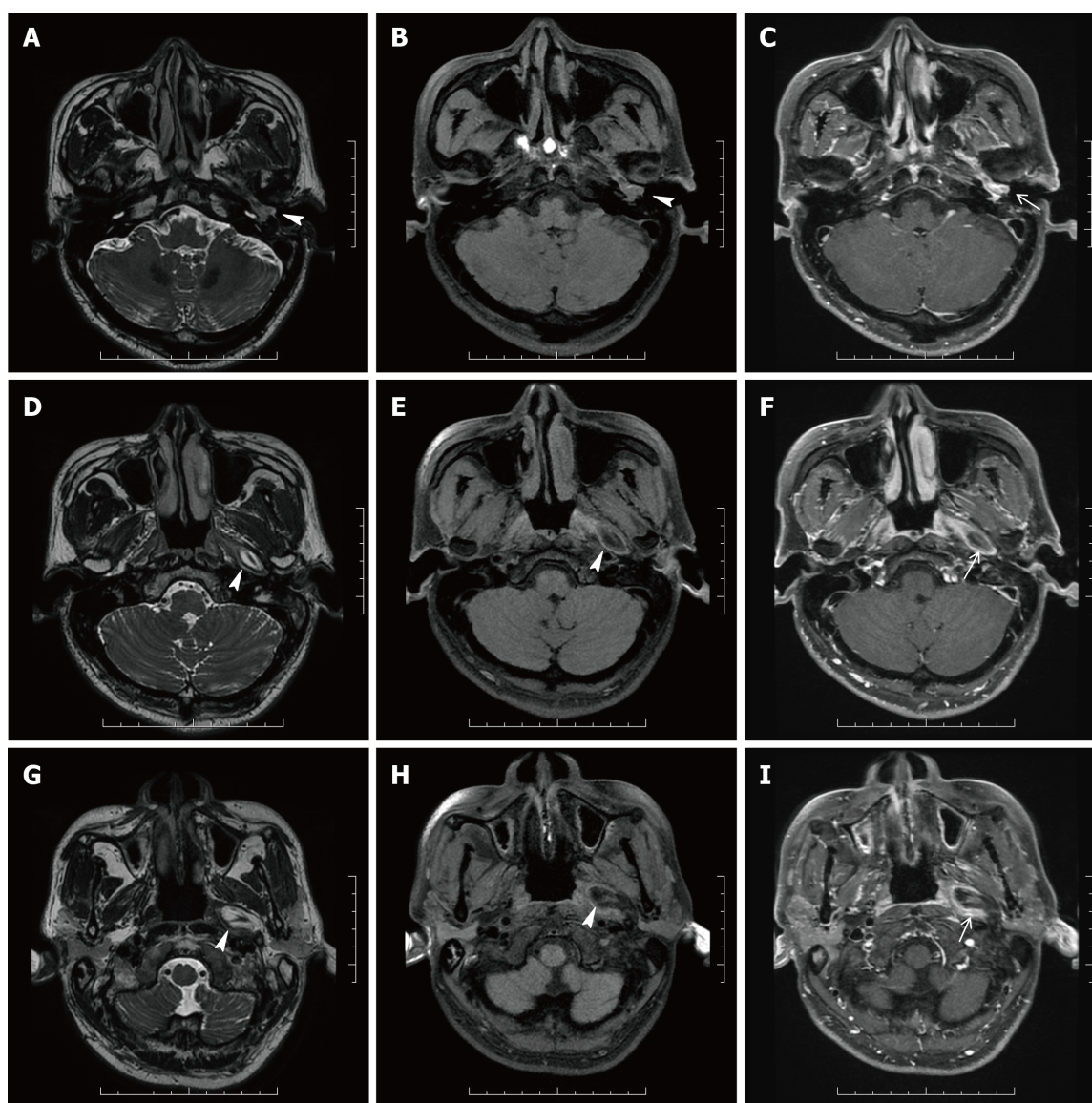


Figure 3 Magnetic resonance imaging of the patient's head and neck. A, D, G: Three-dimensional (3D) T2 weighted image (WI); B, E, H: Fat suppression (FS) 3D T1WI; C, F, I: FS 3D T1WI with contrast (C+); A-C: Magnetic resonance (MR) images in the transverse plane showed the part of the mass which was a homogeneous lesion with slightly higher signal intensity and with enhancement (white arrowheads) in the tympanum and external auditory canal; D-F: MR images in the transverse plane showed the part of the mass which was a well-defined, homogeneous lesion with high signal intensity along the left eustachian tube (white arrowheads), and on FS 3D T1WI, a lesion with decreased signal intensity consistent with macroscopic fat and with a contrast-enhancing rim (black arrowhead) was seen.

FINAL DIAGNOSIS

Mature teratomas.

TREATMENT

The mass was removed completely by mastoidectomy, with the patient under general anesthesia.

OUTCOME AND FOLLOW-UP

After follow-ups at 7 mo and 2 years, the patient showed no signs of disease relapse.

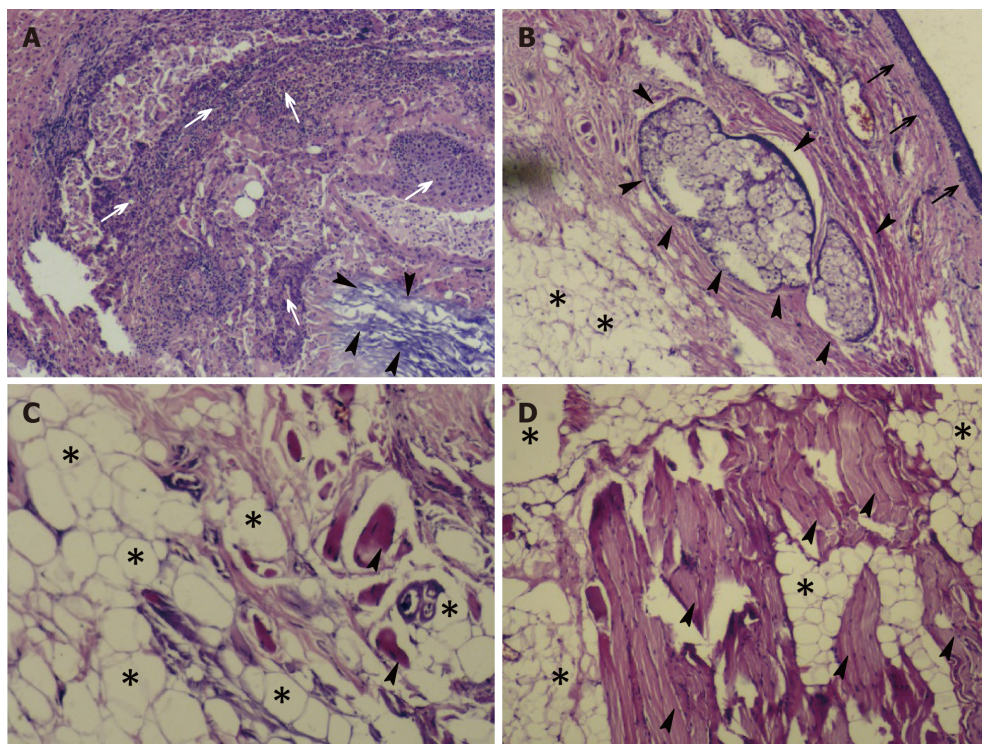


Figure 4 Histopathological appearance of the patient's resected tumor mass. A: Photomicrograph of the eustachian tube teratoma shows a mass with keratinized squamous epithelium (arrowheads) and chronic inflammatory cells (white arrows); B: Squamous epithelium (black arrows), adipose tissue (*) and sebaceous glands (arrowheads); C and D: Adipose tissue (*) and mature skeletal muscle tissue (arrowheads). All images are original magnification of $\times 100$.

DISCUSSION

Mature teratoma is a true neoplasm composed of all three basic germ cell layers (ectoderm, mesoderm, and endoderm), which differs from dermoids and epidermoids [4]. Most cases involve a midline or paraxial location, and the most common site is in the sacrococcygeal region (40%-60% of cases)[5]. Only 2%-10% of cases have involved the head and neck regions[5], especially the cervical and nasopharyngeal regions. We used the PubMed database to search for relevant publications on (keywords) "mature teratoma" and "eustachian tube". We found only eight relevant publications among the English-language literature, excluding reports on dermoid cysts, which represent a special category of teratomas. According to the histologic classification of teratomas in the head and neck region that is most commonly used today, the term 'dermoid' (as it was proposed by Arnold in 1888) is most appropriate[6]. This implies an origin from epidermal and mesodermal elements, which differentiates them histologically from teratomas composed of elements from all three germinal layers and from cholesteatomas, which are only of ectodermal origin[7]. Of these 9 total cases reported to date (including this case), 4 were male and 5 female; the near 1:1 ratio indicates that there is no sex preponderance for ET teratoma. The age of the 9 patients ranged from 1 d to 48 years, with a median of 10-mo-old. The cases had various clinical manifestations, as follow: foul-smelling left otorrhea[8], peripheral palsy of the seventh cranial nerve[5], a tongue-like structure which protruded when the patient cried and retracted into the mouth when swallowing[9], a history of refractory otitis media and a nasopharyngeal mass[3], a discharging left ear since infancy[10], respiratory distress in a premature infant[11] with recurrent otitis media and chronic otorrhea of the left ear[12], and a history of chronic otitis of the right ear from infancy[13]. However, all these manifestations were due to obstruction of the channel or oppression of the surrounding structures.

The case presented here is the first reported for an ET teratoma with the anterior lower part and posterior upper part connected by a thin membranaceous tissue, accompanied by a fleshy polyp in the tympanum and external auditory canal. The patient, who had a history of chronic otitis of the left ear from infancy, was older than the other 8 patients reported for previous cases. It is, therefore, possible that the history of chronic otitis of the left ear and previous operations he underwent led to the formation of a fleshy polyp in the tympanum and external auditory canal. Of note, in

patients with a history of chronic otitis that exhibit polyps in the tympanum and/or external auditory canal, it is important to avoid the assumption that these are merely a result of inflammation. Equally important is to avoid making an immediate call for surgery. Both CT and MRI examinations must be performed to appraise the condition of the ET and identify possible neoplasms. For our patient, the only examination made before his previous surgery was a CT scan. This led to the failure of identifying the ET tumor. Had a preoperative MRI examination been conducted, the ET tumor would likely have been detected and the following operation would have addressed both the inflammation and the tumor.

Ultrasound is an ideal initial imaging modality to investigate neck masses, as it reveals the solid or cystic nature in most cases and localizes the lesion in relation to surrounding structures[14], but it has some limitations when applied to the temporal bone region. A combination of CT and MRI scans provides valuable clinical information to exclude alternative cranial base pathologies and assess the extent of the lesion. The CT scan allows for better evaluation of the bone architecture, whereas the MRI scan can better demonstrate the relationship between the mass and the carotid artery beneath the temporal bone[7]. The typical clinical presentation of ET teratomas includes recurrent episodes of otitis media and chronic otorrhea[15,16], caused by the obstruction of the ET by the teratomas. Ultimately, ET teratoma requires surgical removal and has excellent prognosis upon complete resection[12].

CONCLUSION

In summary, this case highlights the necessity of examination *via* a combination of CT and MRI pre-operation for ET teratoma. The surgical removal itself provides an excellent prognosis upon complete resection.

REFERENCES

1. Aubin A, Pondaven S, Bakhos D, Lardy H, Robier A, Lescanne E. Oropharyngeal teratomas in newborns: management and outcome. *Eur Ann Otorhinolaryngol Head Neck Dis* 2014; **131**: 271-275 [PMID: 24947745 DOI: 10.1016/j.anorl.2012.05.006]
2. Nalavenkata S, Meller C, Forer M, Patel NP. Dermoid cysts of the Eustachian tube: a transnasal excision. *Int J Pediatr Otorhinolaryngol* 2013; **77**: 588-593 [PMID: 23380630 DOI: 10.1016/j.ijporl.2012.12.026]
3. Nicklaus PJ, Forte V, Thorner PS. Hairy polyp of the eustachian tube. *J Otolaryngol* 1991; **20**: 254-257 [PMID: 1920578]
4. Smirniotopoulos JG, Chiechi MV. Teratomas, dermoids, and epidermoids of the head and neck. *Radiographics* 1995; **15**: 1437-1455 [PMID: 8577967 DOI: 10.1148/radiographics.15.6.8577967]
5. Navarro Cunchillos M, Bonachera MD, Navarro Cunchillos M, Cassinello E, Ramos Lizana J, Oña Esteban J. Middle ear teratoma in a newborn. *J Laryngol Otol* 1996; **110**: 875-877 [PMID: 8949302 DOI: 10.1017/s0022215100135212]
6. Tharrington CL, Bossen EH. Nasopharyngeal teratomas. *Arch Pathol Lab Med* 1992; **116**: 165-167 [PMID: 1733412]
7. Kollias SS, Ball WS Jr, Prenger EC, Myers CM 3rd. Dermoids of the eustachian tube: CT and MR findings with histologic correlation. *AJNR Am J Neuroradiol* 1995; **16**: 663-668 [PMID: 7611019]
8. Forrest AW, Carr SJ, Beckenham EJ. A middle ear teratoma causing acute airway obstruction. *Int J Pediatr Otorhinolaryngol* 1993; **25**: 183-189 [PMID: 8436463 DOI: 10.1016/0165-5876(93)90052-5]
9. Wasinwong Y, Chaipasithikul S, Kanchanapitak P. Eustachian tube mature teratoma. *Otolaryngol Head Neck Surg* 2003; **128**: 589-591 [PMID: 12707668 DOI: 10.1016/s0194-5998(02)23310-0]
10. Bowyer DJ, Wilson J, Sillars HA. Mature teratoma of the eustachian tube. *Otol Neurotol* 2012; **33**: e43-e44 [PMID: 22334159 DOI: 10.1097/MAO.0b013e3182487e14]
11. Bayır Ö, Güneri EA, Dilek M, Özer E, Çakmakçı H, Erdağ TK. Nasopharyngeal mature teratoma in the newborn. *Turk Pediatr Ars* 2014; **49**: 257-260 [PMID: 26078673 DOI: 10.5152/tpa.2014.87]
12. Rondenet C, Boudjemaa S, Sileo C, Garabedian EN, Ducou le Pointe H, Blondiaux E. CT and MR imaging findings of teratoma of the Eustachian tube. *Diagn Interv Imaging* 2017; **98**: 269-271 [PMID: 28038916 DOI: 10.1016/j.diii.2016.10.008]
13. Cruz-Toro P, Moya R, Domènech I. Eustachian tube teratoma. *Acta Otorrinolaringol Esp* 2015; **66**: e22-e23 [PMID: 24529876 DOI: 10.1016/j.otorri.2013.11.001]
14. Corvino A, Pignata S, Campanino MR, Corvino F, Giurazza F, Tafuri D, Pinto F, Catalano O. Thyroglossal duct cysts and site-specific differential diagnoses: imaging findings with emphasis on ultrasound assessment. *J Ultrasound* 2020; **23**: 139-149 [PMID: 32052384 DOI: 10.1007/s40477-020-00433-2]
15. Batsakis JG. Tumors of the Head and Neck. 2nd ed. Baltimore: Williams & Wilkins, 1979: 226-228

[DOI: [10.1002/hed.2890030117](https://doi.org/10.1002/hed.2890030117)]

- 16 **Fried MP**, Vernick DM. Dermoid cyst of the middle ear and mastoid. *Otolaryngol Head Neck Surg* 1984; **92**: 594-596 [PMID: [6438594](https://pubmed.ncbi.nlm.nih.gov/6438594/) DOI: [10.1177/019459988409200518](https://doi.org/10.1177/019459988409200518)]



Published by **Baishideng Publishing Group Inc**
7041 Koll Center Parkway, Suite 160, Pleasanton, CA 94566, USA

Telephone: +1-925-3991568

E-mail: bpgoffice@wjgnet.com

Help Desk: <https://www.f6publishing.com/helpdesk>

<https://www.wjgnet.com>

