

World Journal of *Clinical Cases*

World J Clin Cases 2022 September 26; 10(27): 9550-9969



Contents

Thrice Monthly Volume 10 Number 27 September 26, 2022

OPINION REVIEW

- 9550** Psychiatric disorders and pain: The recurrence of a comorbidity
Vyshka G

REVIEW

- 9556** Cardiovascular disease and COVID-19, a deadly combination: A review about direct and indirect impact of a pandemic
Vidal-Perez R, Brandão M, Pazdernik M, Kresoja KP, Carpenito M, Maeda S, Casado-Arroyo R, Muscoli S, Pöss J, Fontes-Carvalho R, Vazquez-Rodriguez JM
- 9573** Molecular factors, diagnosis and management of gastrointestinal tract neuroendocrine tumors: An update
Pavlidis ET, Pavlidis TE

MINIREVIEWS

- 9588** Human-induced pluripotent stem cell-atrial-specific cardiomyocytes and atrial fibrillation
Leowattana W, Leowattana T, Leowattana P
- 9602** COVID-19 and the cardiovascular system-current knowledge and future perspectives
Chatzis DG, Magounaki K, Pantazopoulos I, Bhaskar SMM

ORIGINAL ARTICLE

Case Control Study

- 9611** PDCA nursing in improving quality management efficacy in endoscopic submucosal dissection
He YH, Wang F

Retrospective Study

- 9619** Impact of COVID-19 pandemic on the ocular surface
Marta A, Marques JH, Almeida D, José D, Sousa P, Barbosa I
- 9628** Anatomy and clinical application of suprascapular nerve to accessory nerve transfer
Wang JW, Zhang WB, Li F, Fang X, Yi ZQ, Xu XL, Peng X, Zhang WG
- 9641** Therapeutic effect of two methods on avulsion fracture of tibial insertion of anterior cruciate ligament
Niu HM, Wang QC, Sun RZ
- 9650** Efficacy of transcatheter arterial chemoembolization using pirarubicin-loaded microspheres combined with lobaplatin for primary liver cancer
Zhang C, Dai YH, Lian SF, Liu L, Zhao T, Wen JY

- 9657** Prognostic significance of sex determining region Y-box 2, E-cadherin, and vimentin in esophageal squamous cell carcinoma

Li C, Ma YQ

- 9670** Clinical characteristics and prognosis of orbital solitary fibrous tumor in patients from a Chinese tertiary eye hospital

Ren MY, Li J, Wu YX, Li RM, Zhang C, Liu LM, Wang JJ, Gao Y

Observational Study

- 9680** Altered heart rate variability and pulse-wave velocity after spinal cord injury

Tsou HK, Shih KC, Lin YC, Li YM, Chen HY

- 9693** Intra and extra pelvic multidisciplinary surgical approach of retroperitoneal sarcoma: Case series report

Song H, Ahn JH, Jung Y, Woo JY, Cha J, Chung YG, Lee KH

META-ANALYSIS

- 9703** Meta-analysis of gemcitabine plus nab-paclitaxel combined with targeted agents in the treatment of metastatic pancreatic cancer

Li ZH, Ma YJ, Jia ZH, Weng YY, Zhang P, Zhu SJ, Wang F

- 9714** Clinical efficacy analysis of mesenchymal stem cell therapy in patients with COVID-19: A systematic review

Cao JX, You J, Wu LH, Luo K, Wang ZX

CASE REPORT

- 9727** Treatment of gastric cancer with dermatomyositis as the initial symptom: Two case reports and review of literature

Sun XF, Gao XD, Shen KT

- 9734** Gallbladder hemorrhage—An uncommon surgical emergency: A case report

Valenti MR, Cavallaro A, Di Vita M, Zanghi A, Longo Trischitta G, Cappellani A

- 9743** Successful treatment of stage IIIB intrahepatic cholangiocarcinoma using neoadjuvant therapy with the PD-1 inhibitor camrelizumab: A case report

Zhu SG, Li HB, Dai TX, Li H, Wang GY

- 9750** Myocarditis as an extraintestinal manifestation of ulcerative colitis: A case report and review of the literature

Wang YY, Shi W, Wang J, Li Y, Tian Z, Jiao Y

- 9760** Endovascular treatment of traumatic renal artery pseudoaneurysm with a Stanford type A intramural haematoma: A case report

Kim Y, Lee JY, Lee JS, Ye JB, Kim SH, Sul YH, Yoon SY, Choi JH, Choi H

- 9768** Histiocytoid giant cellulitis-like Sweet syndrome at the site of sternal aspiration: A case report and review of literature

Zhao DW, Ni J, Sun XL

- 9776** Rare giant corneal keloid presenting 26 years after trauma: A case report
Li S, Lei J, Wang YH, Xu XL, Yang K, Jie Y
- 9783** Efficacy evaluation of True Lift®, a nonsurgical facial ligament retightening injection technique: Two case reports
Huang P, Li CW, Yan YQ
- 9790** Synchronous primary duodenal papillary adenocarcinoma and gallbladder carcinoma: A case report and review of literature
Chen J, Zhu MY, Huang YH, Zhou ZC, Shen YY, Zhou Q, Fei MJ, Kong FC
- 9798** Solitary fibrous tumor of the renal pelvis: A case report
Liu M, Zheng C, Wang J, Wang JX, He L
- 9805** Gastric metastasis presenting as submucosa tumors from renal cell carcinoma: A case report
Chen WG, Shan GD, Zhu HT, Chen LH, Xu GQ
- 9814** Laparoscopic correction of hydronephrosis caused by left paraduodenal hernia in a child with cryptorchism: A case report
Wang X, Wu Y, Guan Y
- 9821** Diagnosed corrected transposition of great arteries after cesarean section: A case report
Ichii N, Kakinuma T, Fujikawa A, Takeda M, Ohta T, Kagimoto M, Kaneko A, Izumi R, Kakinuma K, Saito K, Maeyama A, Yanagida K, Takeshima N, Ohwada M
- 9828** Misdiagnosis of an elevated lesion in the esophagus: A case report
Ma XB, Ma HY, Jia XF, Wen FF, Liu CX
- 9834** Diagnostic features and therapeutic strategies for malignant paraganglioma in a patient: A case report
Gan L, Shen XD, Ren Y, Cui HX, Zhuang ZX
- 9845** Infant with reverse-transcription polymerase chain reaction confirmed COVID-19 and normal chest computed tomography: A case report
Ji GH, Li B, Wu ZC, Wang W, Xiong H
- 9851** Pulmonary hypertension secondary to seronegative rheumatoid arthritis overlapping antisynthetase syndrome: A case report
Huang CY, Lu MJ, Tian JH, Liu DS, Wu CY
- 9859** Monitored anesthesia care for craniotomy in a patient with Eisenmenger syndrome: A case report
Ri HS, Jeon Y
- 9865** Emergency treatment and anesthesia management of internal carotid artery injury during neurosurgery: Four case reports
Wang J, Peng YM

- 9873** Resolution of herpes zoster-induced small bowel pseudo-obstruction by epidural nerve block: A case report
Lin YC, Cui XG, Wu LZ, Zhou DQ, Zhou Q
- 9879** Accidental venous port placement *via* the persistent left superior vena cava: Two case reports
Zhou RN, Ma XB, Wang L, Kang HF
- 9886** Application of digital positioning guide plates for the surgical extraction of multiple impacted supernumerary teeth: A case report and review of literature
Wang Z, Zhao SY, He WS, Yu F, Shi SJ, Xia XL, Luo XX, Xiao YH
- 9897** Iatrogenic aortic dissection during right transradial intervention in a patient with aberrant right subclavian artery: A case report
Ha K, Jang AY, Shin YH, Lee J, Seo J, Lee SI, Kang WC, Suh SY
- 9904** Pneumomediastinum and subcutaneous emphysema secondary to dental extraction: Two case reports
Ye LY, Wang LF, Gao JX
- 9911** Hemorrhagic shock due to submucosal esophageal hematoma along with mallory-weiss syndrome: A case report
Oba J, Usuda D, Tsuge S, Sakurai R, Kawai K, Matsubara S, Tanaka R, Suzuki M, Takano H, Shimoizawa S, Hotchi Y, Usami K, Tokunaga S, Osugi I, Katou R, Ito S, Mishima K, Kondo A, Mizuno K, Takami H, Komatsu T, Nomura T, Sugita M
- 9921** Concurrent severe hepatotoxicity and agranulocytosis induced by *Polygonum multiflorum*: A case report
Shao YL, Ma CM, Wu JM, Guo FC, Zhang SC
- 9929** Transient ischemic attack after mRNA-based COVID-19 vaccination during pregnancy: A case report
Chang CH, Kao SP, Ding DC
- 9936** Drug-induced lung injury caused by acetaminophen in a Japanese woman: A case report
Fujii M, Kenzaka T
- 9945** Familial mitochondrial encephalomyopathy, lactic acidosis, and stroke-like episode syndrome: Three case reports
Yang X, Fu LJ
- 9954** Renal pseudoaneurysm after rigid ureteroscopic lithotripsy: A case report
Li YH, Lin YS, Hsu CY, Ou YC, Tung MC

LETTER TO THE EDITOR

- 9961** Role of traditional Chinese medicine in the initiative practice for health
Li Y, Li SY, Zhong Y
- 9964** Impact of the COVID-19 pandemic on healthcare workers' families
Helou M, El Osta N, Husni R

- 9967 Transition beyond the acute phase of the COVID-19 pandemic: Need to address the long-term health impacts of COVID-19

Tsioutis C, Tofarides A, Spernovasilis N

ABOUT COVER

Editorial Board Member of *World Journal of Clinical Cases*, Yusuf Tutar, PhD, Chairman, Director, Full Professor, Department of Basic Pharmaceutical Sciences, Division of Biochemistry, University of Health Sciences, Istanbul 34668, Turkey. ytutar@outlook.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 abstracted and indexed in Science Citation Index Expanded (SCIE, also known as SciSearch®), Journal Citation Reports/Science Edition, Current Contents®/Clinical Medicine, PubMed, PubMed Central, Scopus, Reference Citation Analysis, China National Knowledge Infrastructure, China Science and Technology Journal Database, and Superstar Journals Database. The 2022 Edition of Journal Citation Reports® cites the 2021 impact factor (IF) for WJCC as 1.534; IF without journal self cites: 1.491; 5-year IF: 1.599; Journal Citation Indicator: 0.28; Ranking: 135 among 172 journals in medicine, general and internal; and Quartile category: Q4. The WJCC's CiteScore for 2021 is 1.2 and Scopus CiteScore rank 2021: General Medicine is 443/826.

RESPONSIBLE EDITORS FOR THIS ISSUE

Production Editor: *Ying-Yi Yuan*; Production Department Director: *Xiang Li*; Editorial Office Director: *Jin-Lei 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

September 26, 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>

Misdiagnosis of an elevated lesion in the esophagus: A case report

Xing-Bin Ma, Huai-Yuan Ma, Xing-Fang Jia, Fei-Fei Wen, Cheng-Xia Liu

Specialty type: Medicine, research and experimental

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): C, C, C
Grade D (Fair): D
Grade E (Poor): 0

P-Reviewer: Mohamed SY, Egypt; Nakamura K, Japan; Suresh Kumar VC, United States; Villa E, United States

Received: April 20, 2022

Peer-review started: April 20, 2022

First decision: June 19, 2022

Revised: June 30, 2022

Accepted: August 15, 2022

Article in press: August 15, 2022

Published online: September 26, 2022



Xing-Bin Ma, Huai-Yuan Ma, Xing-Fang Jia, Cheng-Xia Liu, Department of Gastroenterology and Hepatology, Binzhou Medical University Hospital, Binzhou 256603, Shandong Province, China

Fei-Fei Wen, Department of Pathology, Binzhou Medical University Hospital, Binzhou 256603, Shandong Province, China

Corresponding author: Cheng-Xia Liu, PhD, Doctor, Professor, Department of Gastroenterology and Hepatology, Binzhou Medical University Hospital, No. 661 Huanghe 2nd Road, Binzhou 256603, Shandong Province, China. phdlcx@163.com

Abstract

BACKGROUND

Esophageal carcinosarcoma (ECS) is a rare biphasic tumor and a type of esophageal malignancy, which presents as protruding or elevated lesions. ECS patients are often not hospitalized until they have severe dysphagia. ECS is easily misdiagnosed as a benign tumor due to its atypical characteristics under endoscopy. With the popularization of endoscopic treatment, these patients are often referred to endoscopic treatment, such as endoscopic submucosal dissection (ESD). However, there is a lack of consensus on the endoscopic features and therapies for ECS. Here, we report a case of ECS and discuss the value of endoscopic diagnosis and therapeutic strategies.

CASE SUMMARY

A 63-year-old man was admitted to the hospital with dysphagia. During the endoscopic examination, an elevated lesion was found with an erosive and hyperemic surface covered with white pseudomembranous inflammation. Endoscopic ultrasonography (EUS), biopsies, and enhanced thoracic computed tomography were performed, suggesting that it was a benign lesion and located within the submucosal layer. This lesion was diagnosed as a fibrovascular polyp with a Paris classification of 0-Ip. The patient was then referred to ESD treatment. However, the post-ESD pathological and immunohistochemical study showed that this lesion was ECS with a vertical positive margin (T1b stage), indicating that we made a misdiagnosis and achieved a noncurative resection. Due to the potential tumor residue, additional open surgery was performed at the patient's request. In the postoperative pathological study, no tumor remnants or metastases were discovered. The patient was followed for 1 year and had no recurrence.

CONCLUSION

ECS can be misdiagnosed at the initial endoscopy. EUS can help to identify the tumor stage. Patients with T1b stage ECS cannot be routinely referred to ESD

treatment due to the high risk of metastasis and recurrence rate.

Key Words: Esophageal carcinosarcoma; Misdiagnosis; Endoscopic ultrasonography; Endoscopic submucosal dissection; T1 stage; Case report

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

Core Tip: Esophageal carcinosarcoma (ECS) is a rare type of esophageal malignancy. ECS commonly presents as a pedunculated characteristic (0-1p), which is often misdiagnosed due to the lack of specific features. Endoscopic ultrasonography can help to evaluate whether ECS invasion is within the submucosal layer (T1 or T2 stage) but cannot further distinguish whether it is T1a or T1b stage. Due to the high risk of metastasis and recurrence based on the literature review, endoscopic submucosal dissection treatment cannot be routinely recommended for ECS patients with T1b stage disease.

Citation: Ma XB, Ma HY, Jia XF, Wen FF, Liu CX. Misdiagnosis of an elevated lesion in the esophagus: A case report. *World J Clin Cases* 2022; 10(27): 9828-9833

URL: <https://www.wjgnet.com/2307-8960/full/v10/i27/9828.htm>

DOI: <https://dx.doi.org/10.12998/wjcc.v10.i27.9828>

INTRODUCTION

Patients routinely undergo endoscopic evaluation for dysphagia, during which protruding or elevated lesions are frequently found. Some of the lesions are presented as pedunculated lesions, including esophageal adenoma, inflammatory polyps, fibrovascular polyps, carcinosarcoma[1-3], *etc.* However, they lack specific features and have similar endoscopic ultrasonography (EUS) characteristics. Therefore, it is difficult to conclusively diagnose the lesion without the support of postsurgical pathology.

Herein, we report a rare case of esophageal carcinosarcoma (ECS), which was assessed as a benign tumor and treated by endoscopic submucosal dissection (ESD). Nevertheless, post-ESD pathology indicated that it was preoperatively misdiagnosed. Therefore, we systematically evaluated the endoscopic and clinicopathological characteristics of ECS and analyzed the feasibility of endoscopic treatment.

CASE PRESENTATION

Chief complaints

Dysphagia for 3 mo.

History of present illness

A 63-year-old man was admitted to the hospital with dysphagia for 3 mo. The patient can only swallow semi-solid food for 2 wk, with intermittent swallowing pain.

History of past illness

The patient was in good health in the past.

Personal and family history

The patient had no personal and family history.

Physical examination

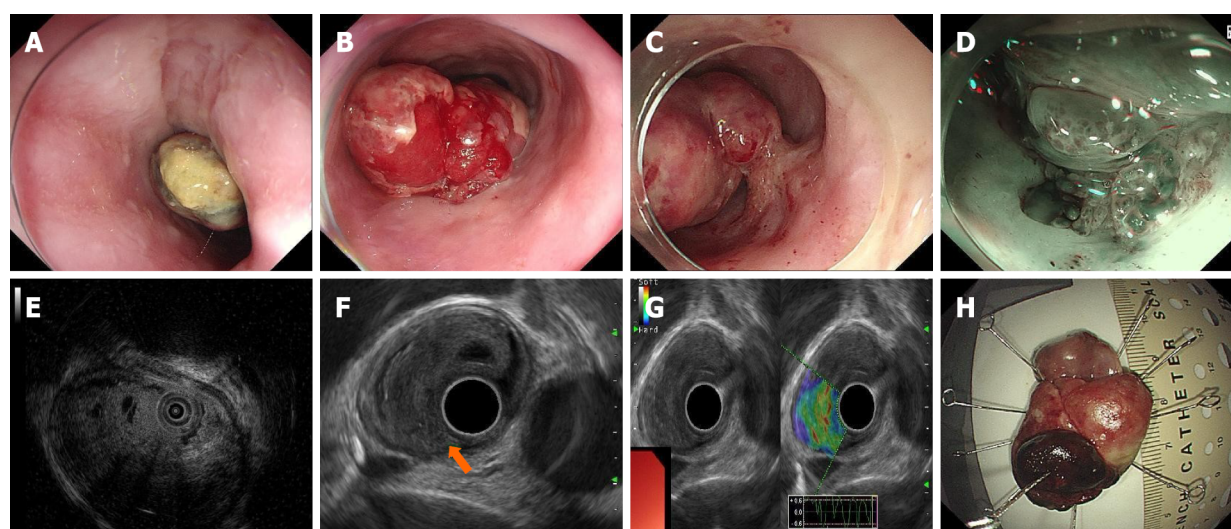
The patient was in good condition. The physical examination was completely normal.

Laboratory examinations

Routine laboratory tests were all within the normal range.

Imaging examinations

During the endoscopic examination, an elevated lesion with an erosive and hyperemic surface covered with white pseudomembranous inflammation was found. It had a short peduncle connected to the mid-



DOI: 10.12998/wjcc.v10.i27.9828 Copyright ©The Author(s) 2022.

Figure 1 Endoscopic features of the lesion. A: The oral side of the esophageal carcinosarcoma (ECS). The surface was covered with white pseudomembranous inflammation; B: The body of the ECS. The surface was hyperemic and eroded; C: The short peduncle connected to the wall of the esophagus; D: The peduncle component revealed by narrow-band imaging; E: Ultrasonic mini-probe; F: Endoscopic ultrasonography revealed that the origin of the ECS was from the submucosal layer and the inherent muscle layer was clear; G: Ultrasonic elastography revealed that the lesion was blue-green, with a tough texture; H: Macroscopic findings of the resected specimen.

esophagus wall and was 30 mm × 40 mm in size. EUS revealed a lesion derived from the submucosal layer with an intact inherent muscle layer, and this lesion was hypoechoic and consisted of internal multicystic components. Ultrasonic elastography revealed that the lesion was blue-green, indicating a tough texture (Figure 1). Multiple biopsies showed necrosis and active fibroblast proliferation. An enhanced thoracic computed tomography scan showed a protuberant lesion in the middle of the esophagus, suggesting a benign tumor. A multidisciplinary consultation was performed, and we preliminarily diagnosed this lesion as a fibrovascular polyp.

FINAL DIAGNOSIS

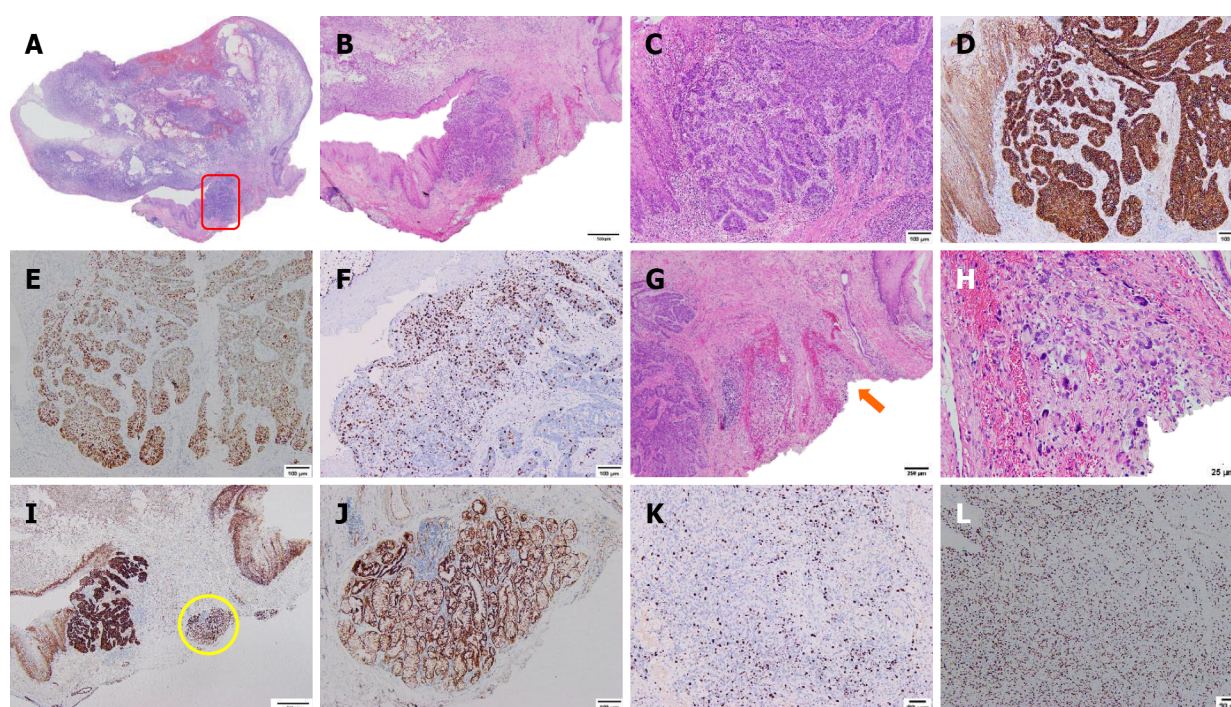
The post-ESD pathological study showed that this lesion was composed of a malignant fibroblast apoptosis component and a basal-like squamous cell carcinoma (BSC) component, indicating ECS. The polypoid mass was predominantly composed of malignant fibrous histiocytoma with a vertical positive margin, horizontal negative margin, and no evidence of vascular or lymphatic invasion. Immunohistochemical (IHC) staining showed CK (-), vimentin (+), CD68 (+), β-catenin (+), p53 (+), S-100 (-), CD34 (-), SMA (-), desmin (-), Twist1 (+), ZEB1 (+), Snai2 (-), PDGFR alpha (-), and a Ki-67 index of 20%. BSC was observed in the neck of the tumor, and its vertical and horizontal margins were negative. IHC staining showed CK (+), E-cadherin (+), p53 (+), vimentin (-), S-100 (-), CD34 (-), CD68 (-), SMA (-), desmin (-), and a Ki-67 index of 30% (Figure 2).

TREATMENT

The following ESD treatment was successful with no obvious adhesion in the submucosal layer after the patient's informed consent was obtained.

OUTCOME AND FOLLOW-UP

Due to the potential tumor residue, additional open surgery was performed at the patient's request. No tumor remnants or metastases were discovered in the postoperative pathological study. The patient was followed for 1 year and had no recurrence.



DOI: 10.12998/wjcc.v10.i27.9828 Copyright ©The Author(s) 2022.

Figure 2 Histological and immunohistochemical findings of the esophageal carcinosarcoma. A: Histological mapping of the esophageal carcinosarcoma; B and C: Hematoxylin-eosin staining of the basal-like squamous cell carcinoma (BSC) component (red rectangle, B \times 20, C \times 100); D: β -catenin staining of the BSC component (positive, \times 100); E: P53 staining of the BSC component (positive, \times 100); F: Ki-67 staining of the BSC component (30%, \times 100); G and H: Hematoxylin-eosin staining of the sarcoma component (orange arrow, G \times 40, H \times 400); I and J: Immunopositive carcinomatous cells for β -catenin are closely adjacent to the invasion depth (yellow circle, I \times 20, J \times 100); K: Ki-67 staining of the sarcoma component (30%, \times 100); L: P53 staining of the sarcoma component (positive, \times 100).

DISCUSSION

ECS is a rare biphasic tumor that accounts for 0.2%-2.8% of all esophageal malignancies. It is characterized by the presence of both malignant epithelial and mesenchymal components[4]. ECS usually presents as a large intraluminal polypoid mass on the upper and middle esophagus, with a median diameter of 55-75 mm. The endoscopic features of this lesion may include a hyperemia surface, erosion, ulceration, brittleness, and easy bleeding, which lack specificity for endoscopic diagnosis[5].

The diagnosis of ECS mainly relies on pathological studies[4]. However, untargeted endoscopic biopsies of this lesion usually reveal components of sarcoma, which makes it easily misdiagnosed. Efforts can be made to potentially improve the biopsy accuracy by targeting the root or peduncle as the epithelial cancer component always exceeds the mass in the range[6].

EUS evaluation of the lesion plays a role in the assessment before treatment. Although lacking specificity in diagnosis, EUS can provide information on invasion depth. According to a report from Taiwan[7], five of six ECS patients were correctly assessed on the invasion depth by EUS. However, all lesions were in the deep invasion (T2 stage). Our preoperative EUS showed that the origin of the ECS was derived from the T1 stage, which was proven by postoperative pathology. However, we also noticed that EUS could not further distinguish whether it was T1a or T1b stage. The reason could be that the echo of sarcoma that invaded the submucosa was similar to the original interstitial composition and therefore could not be distinguished by EUS.

Data on lymph node metastases of ECS at T1 stage are limited[7,8]. In 2006, Sanada *et al*[9] reviewed 57 cases of ECS reported in Japan between 1995 and 2004, among which one was a T1a stage case and 17 were T1b stage cases[9]. Seven (41%) of the T1b stage cases were found to have lymph node metastasis compared with none of the T1a stage cases. In 2021, Chen *et al*[10] reported that none of the ten ECS patients at T1 stage were found to have lymph node metastasis, with no report of T1 subtypes[10]. Since lymph node metastasis is related to prognosis, a detailed assessment is required before treatment.

Data on the prognosis of ESD treatment for ECS in the T1 stage are also limited. One Korean case reported by Cha *et al*[11] in 2014 is very similar to ours[11]. The lesion located within the submucosal layer without evidence of metastasis was treated by ESD. The post-ESD pathological study reported ECS with a vertical positive margin (T1b stage). In contrast, the patient from this Korean study refused to receive additional surgery, and a recurrence was found during an endoscope examination 21 mo later. Two Chinese cases were also treated by ESD, and one case was followed by additional surgery. Unfortunately, neither of them had long-term follow-ups[12,13]. Therefore, robust data on the prognosis

of ESD for ECS are needed.

CONCLUSION

We report a rare case of ECS with BSC, which can be misdiagnosed due to the lack of specific characteristics. Targeted biopsies on the root or peduncle after observation by narrow-band imaging or iodine staining may potentially improve the diagnostic accuracy. EUS can help to evaluate the layer of the origin (T1 or T2 stage) but cannot further distinguish whether it is at the T1a or T1b stage. ESD treatment should not be routinely recommended to ECS patients with T1b stage disease due to the risk of metastasis and high recurrence rate.

FOOTNOTES

Author contributions: Ma XB and Ma HY reviewed the literature and contributed to manuscript drafting; Jia XF was the patient's EUS and ESD surgeon; Wen FF was involved in pathology evaluation; Liu CX was responsible for revising the manuscript for important intellectual content; all the authors provided final approval for the version of the manuscript to be submitted.

Informed consent statement: Written informed consent was obtained from the patient for the publication of this report and any accompanying images.

Conflict-of-interest statement: All the authors report no relevant conflicts of interest for this article.

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).

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: <https://creativecommons.org/licenses/by-nc/4.0/>

Country/Territory of origin: China

ORCID number: Xing-Bin Ma 0000-0002-6854-0420; Huai-Yuan Ma 0000-0002-4666-000X; Xing-Fang Jia 0000-0001-7911-506X; Fei-Fei Wen 0000-0002-2292-0992; Cheng-Xia Liu 0000-0002-1664-5001.

S-Editor: Fan JR

L-Editor: Wang TQ

P-Editor: Fan JR

REFERENCES

- 1 Tsai SJ, Lin CC, Chang CW, Hung CY, Shieh TY, Wang HY, Shih SC, Chen MJ. Benign esophageal lesions: endoscopic and pathologic features. *World J Gastroenterol* 2015; **21**: 1091-1098 [PMID: 25632181 DOI: 10.3748/wjg.v21.i4.1091]
- 2 Tomita H, Miyakawa K, Wada S, Okamoto S, Morimoto T, Kishimoto K, Nakajima Y. The imaging features of protruding esophageal lesions. *Jpn J Radiol* 2016; **34**: 321-330 [PMID: 26968999 DOI: 10.1007/s11604-016-0534-6]
- 3 Ha C, Regan J, Cetindag IB, Ali A, Mellinger JD. Benign esophageal tumors. *Surg Clin North Am* 2015; **95**: 491-514 [PMID: 25965126 DOI: 10.1016/j.suc.2015.02.005]
- 4 Madan AK, Long AE, Weldon CB, Jaffe BM. Esophageal carcinosarcoma. *J Gastrointest Surg* 2001; **5**: 414-417 [PMID: 11985984 DOI: 10.1016/s1091-255x(01)80071-8]
- 5 Cavallin F, Scarpa M, Alfieri R, Cagol M, Ruol A, Rugge M, Ancona E, Castoro C. Esophageal carcinosarcoma: management and prognosis at a single Italian series. *Anticancer Res* 2014; **34**: 7455-7459 [PMID: 25503187]
- 6 Ishida H, Fujishima F, Onodera Y, Konno-Kumagai T, Maruyama S, Okamoto H, Sato C, Heishi T, Sakurai T, Taniyama Y, Kamei T, Sasano H. Esophageal Carcinosarcoma with Basaloid Squamous Cell Carcinoma: A Case Report and Review of the Literature. *Tohoku J Exp Med* 2019; **249**: 255-263 [PMID: 31852851 DOI: 10.1620/tjem.249.255]
- 7 Kuo CJ, Lin TN, Lin CJ, Wu RC, Chang HK, Chu YY, Lien JM, Su MY, Chiu CT. Clinical manifestation of esophageal carcinosarcoma: a Taiwan experience. *Dis Esophagus* 2010; **23**: 122-127 [PMID: 19473206 DOI: 10.1111/j.1442-2050.2009.00976.x]
- 8 Schizas D, Mastoraki A, Bagias G, Ioannidis M, Kanavidis P, Moris D, Tsilimigras DI, Spartalis E, Arkadopoulos N, Liakakos T. Carcinosarcomas of the esophagus: systematic review of a rare nosologic entity. *J BUON* 2018; **23**: 1432-1438 [PMID: 30570870]
- 9 Sanada Y, Hihara J, Yoshida K, Yamaguchi Y. Esophageal carcinosarcoma with intramural metastasis. *Dis Esophagus*

- 2006; **19**: 119-131 [PMID: [16643182](#) DOI: [10.1111/j.1442-2050.2006.00551.x](#)]
- 10 **Chen S**, Shi Y, Lu Z, Wang M, Cong L, Yang B, Chen X, Cai J, Yang X. Esophageal Carcinosarcoma: Analysis of Clinical Features and Prognosis of 24 Cases and a Literature Review. *Cancer Control* 2021; **28**: 10732748211004886 [PMID: [33998308](#) DOI: [10.1177/10732748211004886](#)]
- 11 **Cha RR**, Jung WT, Oh HW, Kim HJ, Ha CY, Kim TH, Ko GH. A case of metachronous development of esophageal squamous cell carcinoma in the patient with esophageal carcinosarcoma. *Korean J Gastroenterol* 2014; **64**: 364-369 [PMID: [25530588](#) DOI: [10.4166/kjg.2014.64.6.364](#)]
- 12 **Jiang ZD**, Zhang YS, Wang ZB, Gao B, Wang L, Zhang ZY, Yang XB. Endoscopic submucosal dissection for esophageal sarcomatoid carcinoma: a case report and literature review. *Weichangbingxue* 2016; **21**: 767-768 [DOI: [10.3969/j.issn.1008-7125.2016.12.018](#)]
- 13 **Zhu Z**, Zhu HH, Liu D, Yin J, Wang L, Chen L. Endoscopic submucosal dissection removed one case of esophageal sarcoma-like carcinoma. *Weichangbingxue* 2017; **23**: 109-110 [DOI: [10.3969/j.issn.1007-1989.2017.01.024](#)]



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>

