

# World Journal of *Clinical Cases*

*World J Clin Cases* 2021 May 16; 9(14): 3227-3486



## Contents

Thrice Monthly Volume 9 Number 14 May 16, 2021

## MINIREVIEWS

- 3227 Non-invasive physical therapy as salvage measure for ischemic skin flap: A literature review  
*Zheng YH, Yin LQ, Xu HK, Gong X*
- 3238 Prediction models for development of hepatocellular carcinoma in chronic hepatitis B patients  
*Guo J, Gao XS*

## ORIGINAL ARTICLE

## Retrospective Cohort Study

- 3252 Burden of atrial fibrillation in patients with rheumatic diseases  
*Khan MZ, Patel K, Patel KA, Doshi R, Shah V, Adalja D, Waqar Z, Franklin S, Gupta N, Gul MH, Jesani S, Kutalek S, Figueredo V*

## Retrospective Study

- 3265 Observation of the effect of one-to-one education on high-risk cases of diabetic foot  
*Fu XJ, Hu SD, Peng YF, Zhou LY, Shu T, Song DD*
- 3273 Pediatric Wilson disease presenting as acute liver failure: Prognostic indices  
*Fang WY, Abuduxikuer K, Shi P, Qiu YL, Zhao J, Li YC, Zhang XY, Wang NL, Xie XB, Lu Y, Knisely AS, Wang JS*

## Observational Study

- 3287 Positive psychological intervention for anxiety, depression and coping in subjects addicted to online games  
*Gao XJ, Sun JJ, Xiang M*

## SYSTEMATIC REVIEWS

- 3294 Cluster headache due to structural lesions: A systematic review of published cases  
*Long RJ, Zhu YS, Wang AP*

## META-ANALYSIS

- 3308 Comparison of smear cytology with liquid-based cytology in pancreatic lesions: A systematic review and meta-analysis  
*Zhang XH, Ma SY, Liu N, Wei ZC, Gao X, Hao YJ, Liu YX, Cai YQ, Wang JH*

## CASE REPORT

- 3320 Bronchial glomus tumor with calcification: A case report  
*Zhang Y, Zhang QP, Ji YQ, Xu J*

- 3327** Acute flaccid paralysis and neurogenic respiratory failure associated with enterovirus D68 infection in children: Report of two cases  
*Zhang Y, Wang SY, Guo DZ, Pan SY, Lv Y*
- 3334** Skeletal muscle metastases of hepatocellular carcinoma: A case report and literature review  
*Song Q, Sun XF, Wu XL, Dong Y, Wang L*
- 3342** Bone cement implantation syndrome during hip replacement in a patient with pemphigus and Parkinson's disease: A case report  
*Zhou W, Zhang WJ, Zhao GQ, Li K*
- 3350** Novel intergenic *KIF5B-MET* fusion variant in a patient with gastric cancer: A case report  
*Wu ZW, Sha Y, Chen Q, Hou J, Sun Y, Lu WK, Chen J, Yu LJ*
- 3356** Recurrent perimesencephalic nonaneurysmal subarachnoid hemorrhage within a short period of time: A case report  
*Li J, Fang X, Yu FC, Du B*
- 3365** Incremental value of three-dimensional and contrast echocardiography in the evaluation of endocardial fibroelastosis and multiple cardiovascular thrombi: A case report  
*Sun LJ, Li Y, Qiao W, Yu JH, Ren WD*
- 3372** Floating elbow combining ipsilateral distal multiple segmental forearm fractures: A case report  
*Huang GH, Tang JA, Yang TY, Liu Y*
- 3379** Acute cholangitis detected ectopic ampulla of Vater in the antrum incidentally: A case report  
*Lee HL, Fu CK*
- 3385** Almitrine for COVID-19 critically ill patients – a vascular therapy for a pulmonary vascular disease: Three case reports  
*Huette P, Abou Arab O, Jounieaux V, Guilbart M, Belhout M, Haye G, Dupont H, Beyls C, Mahjoub Y*
- 3394** Tenosynovial giant cell tumor involving the cervical spine: A case report  
*Zhu JH, Li M, Liang Y, Wu JH*
- 3403** Primary bone anaplastic lymphoma kinase positive anaplastic large-cell lymphoma: A case report and review of the literature  
*Zheng W, Yin QQ, Hui TC, Wu WH, Wu QQ, Huang HJ, Chen MJ, Yan R, Huang YC, Pan HY*
- 3411** Acute spontaneous thoracic epidural hematoma associated with intraspinal lymphangioma: A case report  
*Chia KJ, Lin LH, Sung MT, Su TM, Huang JF, Lee HL, Sung WW, Lee TH*
- 3418** Change in neoadjuvant chemotherapy could alter the prognosis of patients with pancreatic adenocarcinoma: A case report  
*Meyer A, Carvalho BJ, Medeiros KA, Pipek LZ, Nascimento FS, Suzuki MO, Munhoz JV, Iuamoto LR, Carneiro-D'Albuquerque LA, Andraus W*
- 3424** Laparoscopic cholecystectomy for gangrenous cholecystitis in around nineties: Two case reports  
*Inoue H, Ochiai T, Kubo H, Yamamoto Y, Morimura R, Ikoma H, Otsuji E*

- 3432** Radiological insights of ectopic thyroid in the porta hepatis: A case report and review of the literature  
*Chooah O, Ding J, Fei JL, Xu FY, Yue T, Pu CL, Hu HJ*
- 3442** Successful treatment of infantile hepatitis B with lamivudine: A case report  
*Zhang YT, Liu J, Pan XB, Gao YD, Hu YF, Lin L, Cheng HJ, Chen GY*
- 3449** Pure large cell neuroendocrine carcinoma originating from the endometrium: A case report  
*Du R, Jiang F, Wang ZY, Kang YQ, Wang XY, Du Y*
- 3458** Diabetic mastopathy in an elderly woman misdiagnosed as breast cancer: A case report and review of the literature  
*Chen XX, Shao SJ, Wan H*
- 3466** Cronkhite-Canada syndrome with steroid dependency: A case report  
*Jiang D, Tang GD, Lai MY, Huang ZN, Liang ZH*
- 3472** Extremely rare case of necrotizing gastritis in a patient with autoimmune hepatitis: A case report  
*Moon SK, Yoo JJ, Kim SG, Kim YS*
- 3478** Paget's disease of bone: Report of 11 cases  
*Miao XY, Wang XL, Lyu ZH, Ba JM, Pei Y, Dou JT, Gu WJ, Du J, Guo QH, Chen K, Mu YM*

**ABOUT COVER**

Editorial Board Member of *World Journal of Clinical Cases*, Nicola Montemurro, MD, PhD, Assistant Professor, Consultant Physician-Scientist, Neurosurgeon, Surgeon, Surgical Oncologist, Department of Translational Research and New Technologies in Medicine and Surgery, University of Pisa, Pisa 56126, Italy. nicola.montemurro@unipi.it

**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 2020 Edition of Journal Citation Reports® cites the 2019 impact factor (IF) for WJCC as 1.013; IF without journal self cites: 0.991; Ranking: 120 among 165 journals in medicine, general and internal; and Quartile category: Q3. The WJCC's CiteScore for 2019 is 0.3 and Scopus CiteScore rank 2019: General Medicine is 394/529.

**RESPONSIBLE EDITORS FOR THIS ISSUE**

Production Editor: Jia-Hui Li; Production Department Director: Yun-Jie Ma; 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**

Dennis A Bloomfield, Sandro Vento, Bao-Gan Peng

**EDITORIAL BOARD MEMBERS**

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

**PUBLICATION DATE**

May 16, 2021

**COPYRIGHT**

© 2021 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>



## Acute cholangitis detected ectopic ampulla of Vater in the antrum incidentally: A case report

Hsu-Lin Lee, Chun-Kai Fu

**ORCID number:** Hsu-Lin Lee 0000-0003-1338-945X; Chun-Kai Fu 0000-0002-8195-568x.

**Author contributions:** Fu CK and Lee HL were the patient's physicians; Lee HL collected the data and wrote the manuscript; Fu CK revised the manuscript; All authors approved the final version of the manuscript.

### Informed consent statement:

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

**Conflict-of-interest statement:** The authors declare that they have no competing interests.

### 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 which was selected by an in-house editor and fully peer-reviewed by external reviewers. It is distributed in accordance with the Creative Commons Attribution Non Commercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially,

**Hsu-Lin Lee, Chun-Kai Fu**, Department of Internal Medicine, Taichung Armed Forces General Hospital, Taichung 411, Taiwan

**Hsu-Lin Lee, Chun-Kai Fu**, Department of Internal Medicine, National Defense Medical Center, Taipei 114, Taiwan

**Corresponding author:** Chun-Kai Fu, MD, Chief Doctor, Department of Internal Medicine, Taichung Armed Forces General Hospital, No. 348 Sec. 2 Zhongshan Rd., Taichung 411, Taiwan. [gr1027@livemail.tw](mailto:gr1027@livemail.tw)

## Abstract

### BACKGROUND

The ampulla of Vater is an opening at the confluence of the common bile duct and pancreatic duct. It is located in the second portion of the duodenum. An ectopic papilla of Vater is an anomalous termination. Few cases have been reported. We report the rare case of a man with an ectopic ampulla of Vater in the pylorus.

### CASE SUMMARY

An 82-year-old man had experienced abdominal pain and fever with chills 1 d before his presentation. A computed tomography scan of the abdomen demonstrated dilatation of the common bile duct approximately 2.2 cm in width. Gas retention was found in his intrahepatic ducts. Acute cholangitis with pneumobilia was identified, and he was hospitalized. Esophagogastroduodenoscopy and endoscopic retrograde cholangiopancreatography disclosed no ampulla of Vater in the second portion of the duodenum. Moreover, a capsule-like foreign body (pharmaceutical desiccant) approximately 1 cm × 2 cm in size was found at the gastric antrum and peri-pyloric region. After the foreign body was removed, one orifice presented over the pyloric ring in the stomach, a suspected ectopic ampulla of Vater. Subsequently, sludge in the common bile duct was cleaned, and balloon dilatation was performed. The general condition improved daily. The patient was discharged in a stable condition and followed in our outpatient department.

### CONCLUSION

This case involved an ampulla of Vater in an unusual location. Endoscopic retrograde cholangiopancreatography with balloon dilatation is the main treatment recommended and performed.



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/>

**Manuscript source:** Unsolicited manuscript

**Specialty type:** Medicine, research and experimental

**Country/Territory of origin:** Taiwan

**Peer-review report's scientific quality classification**

Grade A (Excellent): 0  
Grade B (Very good): 0  
Grade C (Good): C, C  
Grade D (Fair): D  
Grade E (Poor): 0

**Received:** November 9, 2020

**Peer-review started:** November 9, 2020

**First decision:** February 12, 2021

**Revised:** February 22, 2021

**Accepted:** March 12, 2021

**Article in press:** March 12, 2021

**Published online:** May 16, 2021

**P-Reviewer:** Gao DJ, Moon SH

**S-Editor:** Fan JR

**L-Editor:** Filipodia

**P-Editor:** Li JH



**Key Words:** Ectopic papilla of Vater; Ectopic ampulla of Vater; Pneumobilia; Endoscopic retrograde cholangiopancreatography; Acute cholangitis; Case report

©The Author(s) 2021. Published by Baishideng Publishing Group Inc. All rights reserved.

**Core Tip:** Ectopic papilla of Vater is scarcely reported. Potential locations of ectopic papilla are the stomach, pyloric canal, duodenal bulb, or third or fourth portion of the duodenum. Anomalous termination in the stomach is rare. Although this anatomy may mislead endoscopic retrograde cholangiopancreatography operators, this nonetheless constitutes a safe and common therapeutic procedure. When no ampulla of Vater is detected in the second portion of the duodenum, ectopic papilla of Vater should be considered.

**Citation:** Lee HL, Fu CK. Acute cholangitis detected ectopic ampulla of Vater in the antrum incidentally: A case report. *World J Clin Cases* 2021; 9(14): 3379-3384

**URL:** <https://www.wjgnet.com/2307-8960/full/v9/i14/3379.htm>

**DOI:** <https://dx.doi.org/10.12998/wjcc.v9.i14.3379>

## INTRODUCTION

The ampulla of Vater is an opening at the confluence of the common bile duct and pancreatic duct. It is located in the second portion of the duodenum and is surrounded by the sphincter of Oddi. Anomalous termination of the common bile duct, known as ectopic papilla of Vater, is predominant in men, though uncommon and potentially related to abnormal embryogenetic formation. The reported incidence of anomalous termination of bile duct termination is approximately 5.6% to 23.0%[1]. The incidence can be underestimated because of the limited number of cases, and the condition remains undetected until symptoms present. Increases in incidence and in prevalence may be due to the increasingly common use of endoscopic retrograde cholangiopancreatography (ERCP). Potential locations for ectopic papilla are the stomach, pyloric canal, duodenal bulb, and the third or fourth portion of the duodenum[2]. In most cases, it remains undetected until symptoms present. Complications such as pancreatitis, biliary tract infection, and hyperamylasemia are mild and may be alleviated by conventional therapies[3]. Thus, we report the case of a man with an ectopic ampulla of Vater in the pylorus.

## CASE PRESENTATION

### Chief complaints

An 82-year-old man experienced abdominal pain and fever with chills 1 d before his presentation.

### History of present illness

The severity of these symptoms increased gradually. Nausea and vomiting were also subsequently noted.

### History of past illness

The patient had a history of hypertension. The patient underwent surgical repair due to bowel perforation and laparoscopic cholecystectomy due to cholecystitis.

### Personal and family history

There was no significant personal or family history.

### Physical examination

The patient's temperature was 38.6 °C, his heart rate was 101 bpm, his respiratory rate was 22 breaths per minute, and his blood pressure was 112/84 mmHg. Yellow skin discoloration and tenderness over the upper abdominal region were noted.

### Laboratory examinations

The patient's leukocyte count was 14300/ $\mu$ L with 85.9% neutrophils, 7.4% lymphocytes, and 6.2% monocytes. Other blood tests revealed impaired liver function, reporting aspartate aminotransferase: 181 U/L, alanine aminotransferase: 131 U/L, total bilirubin: 2.3 mg/dL, and C-reactive protein: 12.48 mg/dL. The bile culture yielded *Enterococcus faecium*, *Escherichia coli*, *Klebsiella pneumoniae*, and *Bacteroides fragilis*.

### Imaging examinations

Computed tomography of the abdomen demonstrated dilatation of the common bile duct measuring approximately 2.2 cm. Gas retention was present in the intrahepatic ducts (Figure 1). Cholangitis with pneumobilia was suggested.

### Further diagnostic work-up

The patient underwent percutaneous transhepatic cholangiography and drainage and collection of bile for culture. We also performed esophagogastroduodenoscopy and ERCP, which disclosed a gastric ulcer over the antrum and pylorus stenosis with partial gastric outlet obstruction. However, the ampulla of Vater was not located in the second portion of the duodenum. Moreover, a capsule-like foreign body (pharmaceutical desiccant) measuring approximately 1 cm  $\times$  2 cm was present at the gastric antrum and the peri-pylorus region (Figure 2). We removed the foreign body and found one orifice over the pyloric ring in the stomach, suggesting ectopic ampulla of Vater (Figure 3). A catheter was inserted through the endoscope to the ectopic orifice at the pyloric ring. Sludge was noted in the common bile duct. Balloon dilatation was therefore performed. Cholangiography demonstrated a dilated common bile duct (Figure 4). Magnetic resonance images demonstrated a dilated common bile duct drained into the pylorus (Figure 5).

## FINAL DIAGNOSIS

The final diagnosis of the presented case was acute cholangitis with an ectopic ampulla of Vater.

## TREATMENT

Initially, we prescribed ceftriaxone (2 g IV QD) as an empirical antibiotic. After percutaneous transhepatic cholangiography and drainage, epigastric pain improved. Nevertheless, high fever was persistent, and we therefore consulted an infectologist and shifted the antibiotic treatment to Doripenam (250 mg IV Q8H) and vancomycin (1 g IV Q12H). These antibiotics were effective for all bile cultures. Because obstruction of the common bile duct was resolved and antibiotics were effective according to bile culture results, the patient's fever gradually subsided, and sepsis was brought under control.

## OUTCOME AND FOLLOW-UP

The patient's general condition improved daily. He was discharged in a stable condition and follow-ups continued in our outpatient department. We also educated the patient about lifestyle modification and avoidance of the supine position immediately after meals or eating before sleep. After doing so, there was no recurrent cholangitis.

## DISCUSSION

Ectopic papilla of Vater is an underdiagnosed disease, and anomalous termination in the stomach is rare[2,4]. A retrospective study with 6133 enrollees who had received ERCP in Taiwan between 1988 and 2010 reported an incidence of approximately 0.13%, corresponding to the prevalence rate of Taiwan's general population[2].



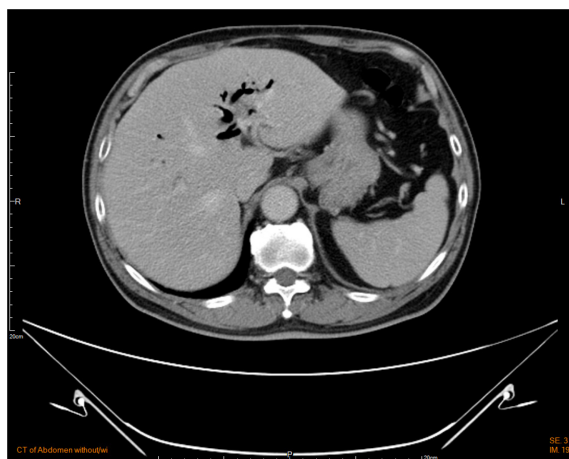


Figure 1 Computed tomography scan of the abdomen demonstrated gas retention in the intrahepatic ducts, suggesting pneumobilia.

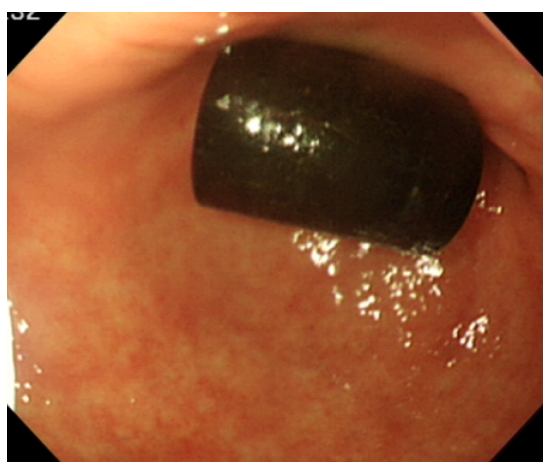
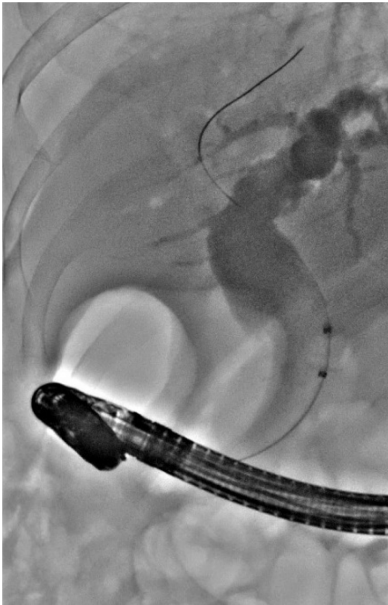


Figure 2 There was a capsule-like foreign body approximately 1 cm × 2 cm in size at the gastric antrum and peri-pyloric region.

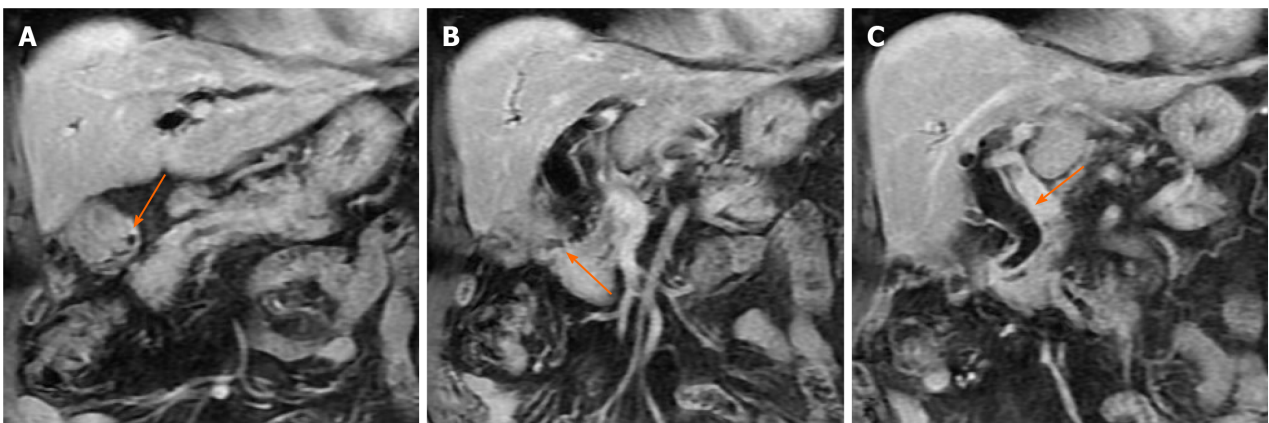


Figure 3 Orifice present over the pyloric ring in stomach noted after removal of a foreign body. An ectopic ampulla of Vater was suspected.

The hepatic diverticulum is usually divided into the hepatic pars and cystic pars during embryogenesis. The hepatic pars develops into both the liver and hepatic ducts, whereas the cystic pars develops into the gallbladder and cystic duct. The common bile duct originates in the hepatic antrum, which is the common area of the hepatic diverticulum[4]. Anomalies in biliary tree drainage can cause early subdivision and disruption of the hepatic diverticulum, which later develops into a duct emptying



**Figure 4 Cholangiography.** The wire-guided catheter was inserted through the endoscope into the ectopic orifice at the pyloric ring.



**Figure 5 T1-weighted magnetic resonance images with gadolinium-based contrast media.** A: Common bile duct (arrow) was dilated; B and C: Common bile duct (arrow) narrowed and drained into the pylorus.

into the stomach[5]. However, the anomalous embryogenetic formation process remains unclear and is not fully understood.

The presenting clinical symptoms include epigastric abdominal pain, dyspepsia, nausea, vomiting, fever, and jaundice. These may be associated with the absence of a sphincter, which allows the passage of gastroduodenal contents into the main bile duct, potentially causing biliary obstruction and even cholangitis[4]. In our case, reducing gastric contents or volume decreased the possibility for debris refluxing into the common bile duct. In addition, prokinetic drugs could be helpful by increasing the motility of the stomach and accelerating gastric emptying. Those might be beneficial to prevent recurrent cholangitis[6].

The pathogenesis of ectopic papilla associated malignancy is unclear. Only one case report is available of periampullary carcinoma with an ectopic ending of the ampulla of Vater in the fourth part of the duodenum[7].

Diagnosis is dependent on the observation of the orifice location and duct through radiographic visualization with contrast medium[2,8]. Recognizing an ectopic papilla of Vater and ruling out fistulas, which may be secondary to ulcer diseases or choledocholithiasis, spontaneous or iatrogenic surgical fistulas, or surgical choledochenteric diversions are also crucial[9].

Currently, an ectopic papilla of Vater can be detected through various methods, such as percutaneous transhepatic cholangiography, upper gastrointestinal endoscopy, ERCP, magnetic resonance cholangiopancreatography, and barium

meals[10]. In particular, ERCP is a putatively effective procedure with efficacy and safety, although anatomical alteration increases the difficulty of intervention and the risk of complications; that is, ERCP operators may be unable to establish the location of the ectopic orifice of papilla. Infrequent complications related to ERCP include pancreatitis, bleeding, perforation, biliary tract infection, and hyperamylasemia. A hook-shaped configuration may sometimes be visible with cholangiography, but this cannot be considered a reliable criterion. The reason for this is that the configuration may dynamically alter according to a patient's position[2]. Balloon dilatation is the main treatment recommended and performed. Surgery is the last resort in cases when endoscopic treatment is ineffective.

## CONCLUSION

We presented a rare case of an ectopic ampulla of Vater in the pylorus. When the ampulla of Vater is not visible in the second portion of the duodenum, ectopic papilla of Vater should be considered as a diagnosis.

## REFERENCES

- 1 **Saritas U**, Senol A, Ustundag Y. The clinical presentations of ectopic biliary drainage into duodenal bulb and stomach with a thorough review of the current literature. *BMC Gastroenterol* 2010; **10**: 2 [PMID: 20064279 DOI: 10.1186/1471-230X-10-2]
- 2 **Peng YC**, Chow WK. Ectopic papilla of Vater in duodenum bulb: A hospital-based study. *Medicine (Baltimore)* 2019; **98**: e14642 [PMID: 30813203 DOI: 10.1097/MD.00000000000014642]
- 3 **Hong J**, Pan W, Zuo W, Wang A, Zhu L, Zhou X, Li G, Liu Z, Liu P, Zhen H, Zhu Y, Ma J, Yuan J, Shu X, Lu N, Chen Y. Efficacy and safety of therapeutic ERCP in patients with ectopic papilla of Vater. *Medicine (Baltimore)* 2020; **99**: e18536 [PMID: 31895789 DOI: 10.1097/MD.00000000000018536]
- 4 **Guerra I**, Rábago LR, Bermejo F, Quintanilla E, García-Garzón S. Ectopic papilla of Vater in the pylorus. *World J Gastroenterol* 2009; **15**: 5221-5223 [PMID: 19891024 DOI: 10.3748/wjg.15.5221]
- 5 **Bernard P**, Le Borgne J, Dupas B, Kohnen-Shari N, Raoult S, Hamel A. Double common bile duct with ectopic drainage into the stomach. Case report and review of the literature. *Surg Radiol Anat* 2001; **23**: 269-272 [PMID: 11694973 DOI: 10.1007/s00276-001-0269-6]
- 6 **Koek GH**, Vos R, Sifrim D, Cuomo R, Janssens J, Tack J. Mechanisms underlying duodeno-gastric reflux in man. *Neurogastroenterol Motil* 2005; **17**: 191-199 [PMID: 15787939 DOI: 10.1111/j.1365-2982.2004.00633.x]
- 7 **Jin SG**, Chen ZY, Yan LN, Zeng Y, Huang W, Xu N. A rare case of periampullary carcinoma with ectopic ending of Vater's ampulla. *World J Gastroenterol* 2009; **15**: 4729-4731 [PMID: 19787838 DOI: 10.3748/wjg.15.4729]
- 8 **Lee SS**, Kim MH, Lee SK, Kim KP, Kim HJ, Bae JS, Seo DW, Ha HK, Kim JS, Kim CD, Chung JP, Min YI. Ectopic opening of the common bile duct in the duodenal bulb: clinical implications. *Gastrointest Endosc* 2003; **57**: 679-682 [PMID: 12709696 DOI: 10.1067/mge.2003.210]
- 9 **Pereira-Lima J**, Pereira-Lima LM, Nestrowski M, Cuervo C. Anomalous location of the papilla of Vater. *Am J Surg* 1974; **128**: 71-74 [PMID: 4834898 DOI: 10.1016/0002-9610(74)90237-2]
- 10 **Nasseri-Moghaddam S**, Nokhbeh-Zaeem H, Soroush Z, Bani-Solaiman Sheybani S, Mazloum M. Ectopic location of the ampulla of Vater within the pyloric channel. *Middle East J Dig Dis* 2011; **3**: 56-58 [PMID: 25197533]



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](mailto:bpgoffice@wjgnet.com)

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

<https://www.wjgnet.com>

