

World Journal of *Clinical Cases*

World J Clin Cases 2019 October 26; 7(20): 3168-3383



OPINION REVIEW

- 3168 Clinical use of low-dose aspirin for elders and sensitive subjects
Zhang Y, Fang XM, Chen GX

ORIGINAL ARTICLE**Retrospective Study**

- 3175 Distribution and drug resistance of pathogenic bacteria in emergency patients
Huai W, Ma QB, Zheng JJ, Zhao Y, Zhai QR
- 3185 Comparative analysis of robotic vs laparoscopic radical hysterectomy for cervical cancer
Chen L, Liu LP, Wen N, Qiao X, Meng YG
- 3194 Feasibility of laparoscopic isolated caudate lobe resection for rare hepatic mesenchymal neoplasms
Li Y, Zeng KN, Ruan DY, Yao J, Yang Y, Chen GH, Wang GS
- 3202 Rh-incompatible hemolytic disease of the newborn in Hefei
Bi SH, Jiang LL, Dai LY, Zheng H, Zhang J, Wang LL, Wang C, Jiang Q, Liu Y, Zhang YL, Wang J, Zhu C, Liu GH, Teng RJ
- 3208 Soft tissue release combined with joint-sparing osteotomy for treatment of cavovarus foot deformity in older children: Analysis of 21 cases
Chen ZY, Wu ZY, An YH, Dong LF, He J, Chen R

Observational Study

- 3217 Clinical characteristics of sentinel polyps and their correlation with proximal colon cancer: A retrospective observational study
Wang M, Lu JJ, Kong WJ, Kang XJ, Gao F

Prospective Study

- 3226 Longitudinal observation of intraocular pressure variations with acute altitude changes
Xie Y, Sun YX, Han Y, Yang DY, Yang YQ, Cao K, Li SN, Li X, Lu XX, Wu SZ, Wang NL

Randomized Controlled Trial

- 3237 Combination of propofol and dezocine to improve safety and efficacy of anesthesia for gastroscopy and colonoscopy in adults: A randomized, double-blind, controlled trial
Li XT, Ma CQ, Qi SH, Zhang LM

META-ANALYSIS

- 3247 Prognostic significance of malignant ascites in gastric cancer patients with peritoneal metastasis: A systemic review and meta-analysis
Zheng LN, Wen F, Xu P, Zhang S

CASE REPORT

- 3259 Gonadotrophin-releasing hormone agonist-induced pituitary adenoma apoplexy and casual finding of a parathyroid carcinoma: A case report and review of literature
Triviño V, Fidalgo O, Juane A, Pombo J, Cordido F
- 3267 Constrictive pericarditis as a cause of refractory ascites after liver transplantation: A case report
Bezjak M, Kocman B, Jadrijević S, Gašparović H, Mrzljak A, Kanižaj TF, Vujanić D, Bubalo T, Mikulić D
- 3271 Endoluminal closure of an unrecognized penetrating stab wound of the duodenum with endoscopic band ligation: A case report
Kim DH, Choi H, Kim KB, Yun HY, Han JH
- 3276 Spontaneous superior mesenteric artery dissection following upper gastrointestinal panendoscopy: A case report and literature review
Ou Yang CM, Yen YT, Chua CH, Wu CC, Chu KE, Hung TI
- 3282 Hepatic amyloidosis leading to hepatic venular occlusive disease and Budd-Chiari syndrome: A case report
Li TT, Wu YF, Liu FQ, He FL
- 3296 De Winter syndrome and ST-segment elevation myocardial infarction can evolve into one another: Report of two cases
Lin YY, Wen YD, Wu GL, Xu XD
- 3303 Next generation sequencing reveals co-existence of hereditary spherocytosis and Dubin-Johnson syndrome in a Chinese girl: A case report
Li Y, Li Y, Yang Y, Yang WR, Li JP, Peng GX, Song L, Fan HH, Ye L, Xiong YZ, Wu ZJ, Zhou K, Zhao X, Jing LP, Zhang FK, Zhang L
- 3310 Recognizable type of pituitary, heart, kidney and skeletal dysplasia mostly caused by SEMA3A mutation: A case report
Hu F, Sun L
- 3322 Repeated lumps and infections: A case report on breast augmentation complications
Zhang MX, Li SY, Xu LL, Zhao BW, Cai XY, Wang GL
- 3329 Severe mental disorders following anti-retroviral treatment in a patient on peritoneal dialysis: A case report and literature review
He QE, Xia M, Ying GH, He XL, Chen JH, Yang Y

- 3335** Fish bone-induced myocardial injury leading to a misdiagnosis of acute myocardial infarction: A case report
Wang QQ, Hu Y, Zhu LF, Zhu WJ, Shen P
- 3341** Potentially fatal electrolyte imbalance caused by severe hydrofluoric acid burns combined with inhalation injury: A case report
Fang H, Wang GY, Wang X, He F, Su JD
- 3347** Ureter - an unusual site of breast cancer metastasis: A case report
Zhou ZH, Sun LJ, Zhang GM
- 3353** Alternative technique to save ischemic bowel segment in management of neonatal short bowel syndrome: A case report
Geng L, Zhou L, Ding GJ, Xu XL, Wu YM, Liu JJ, Fu TL
- 3358** Sister Mary Joseph's nodule in endometrial carcinoma: A case report
Li Y, Guo P, Wang B, Jia YT
- 3364** Synchronous quadruple primary malignancies of the cervix, endometrium, ovary, and stomach in a single patient: A case report and review of literature
Wang DD, Yang Q
- 3372** Ureteral Ewing's sarcoma in an elderly woman: A case report
Li XX, Bi JB
- 3377** Anaplastic lymphoma kinase-negative anaplastic large cell lymphoma masquerading as Behcet's disease: A case report and review of literature
Luo J, Jiang YH, Lei Z, Miao YL

ABOUT COVER

Editorial Board Member of *World Journal of Clinical Cases*, Faycal Lakhdar, MD, Professor, Department of Neurosurgery, University Hospital Center of Fes, University Sidi Mohammed Ben Abdellah, FES 10000, Morocco

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 PubMed, PubMed Central, Science Citation Index Expanded (also known as SciSearch®), and Journal Citation Reports/Science Edition. The 2019 Edition of Journal Citation Reports cites the 2018 impact factor for *WJCC* as 1.153 (5-year impact factor: N/A), ranking *WJCC* as 99 among 160 journals in Medicine, General and Internal (quartile in category Q3).

RESPONSIBLE EDITORS FOR THIS ISSUE

Responsible Electronic Editor: *Ji-Hong Liu*
 Proofing Production Department Director: *Yun-Xiaojuan Wu*

NAME OF JOURNAL

World Journal of Clinical Cases

ISSN

ISSN 2307-8960 (online)

LAUNCH DATE

April 16, 2013

FREQUENCY

Semimonthly

EDITORS-IN-CHIEF

Dennis A Bloomfield, Bao-Gan Peng, Sandro Vento

EDITORIAL BOARD MEMBERS

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

EDITORIAL OFFICE

Jin-Lei Wang, Director

PUBLICATION DATE

October 26, 2019

COPYRIGHT

© 2019 Baishideng Publishing Group Inc

INSTRUCTIONS TO AUTHORS

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

GUIDELINES FOR ETHICS DOCUMENTS

<https://www.wjnet.com/bpg/GerInfo/287>

GUIDELINES FOR NON-NATIVE SPEAKERS OF ENGLISH

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

PUBLICATION MISCONDUCT

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

ARTICLE PROCESSING CHARGE

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

STEPS FOR SUBMITTING MANUSCRIPTS

<https://www.wjnet.com/bpg/GerInfo/239>

ONLINE SUBMISSION

<https://www.f6publishing.com>

Fish bone-induced myocardial injury leading to a misdiagnosis of acute myocardial infarction: A case report

Qian-Qian Wang, Yi Hu, Liang-Feng Zhu, Wen-Jun Zhu, Peng Shen

ORCID number: Qian-Qian Wang (0000-0002-1844-9899); Yi Hu (0000-0003-3337-5039); Liang-Feng Zhu (0000-0002-0174-8200); Wen-Jun Zhu (0000-0002-5230-9451); Peng Shen (0000-0003-0872-8672).

Author contributions: Wang QQ and Shen P were the patient's intensive care physicians, and they reviewed the literature and contributed to manuscript drafting; Hu Y was the patient's cardiothoracic surgeon, and he reviewed the literature and contributed to manuscript drafting; Zhu LF contributed to manuscript drafting; Zhu WJ analyzed and interpreted the imaging findings. All authors approved the publication of the manuscript.

Supported by The Key Medical Disciplines of Jiaxing - Critical Care Med (Supporting Subject), No. 2019-zc-12.

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

Conflict-of-interest statement: The authors declare that they have no conflict 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).

Open-Access: This article is an open-access article which was selected by an in-house editor and fully peer-reviewed by external

Qian-Qian Wang, Peng Shen, Department of Intensive Care Unit, The First Hospital of Jiaxing, Jiaxing 314001, Zhejiang Province, China

Yi Hu, Department of Cardiac Surgery, The First Hospital of Jiaxing, Jiaxing 314001, Zhejiang Province, China

Liang-Feng Zhu, Department of Cardiology, The First Hospital of Jiaxing, Jiaxing 314001, Zhejiang Province, China

Wen-Jun Zhu, Department of Ultrasound, The First Hospital of Jiaxing, Jiaxing 314001, Zhejiang Province, China

Corresponding author: Peng Shen, PhD, Chairman, Department of Intensive Care Unit, The First Hospital of Jiaxing, 1882 Zhonghuannan Road, Jiaxing 314001, Zhejiang Province, China. docshen@126.com.

Telephone: +86-573-82519928

Abstract

BACKGROUND

Acute chest pain (ACP) is very common among patients presenting to emergency departments. Nevertheless, ACP caused by esophageal foreign body is relatively rarely reported.

CASE SUMMARY

A 56-year-old man suffering from chest pain (increased pain for the last 9 h) was admitted to our hospital on October 25, 2015. After undergoing physical examination and laboratory blood testing, he was diagnosed with acute anterior myocardial infarction. Consequently, the patient underwent emergency percutaneous coronary angiography; however, no myocardial infarction signs were observed. Later on, the patient experienced respiration failure and therefore was transferred to intensive care unit. Cardiac ultrasound showed pericardial effusion, which was considered as the cause of shock. He then underwent pericardium puncture drainage and the circulation temporarily improved. Nevertheless, persistent pericardial bleeding, unclear bleeding causes, and clot formation induced poor drainage led to worsening of cardiac tamponade symptoms. Consequently, the patient underwent emergency exploratory thoracotomy, which revealed a fish bone causing pericardial bleeding. The bone was removed, and the damaged blood vessels were mended. Eventually, the patient was discharged in good clinical condition.

CONCLUSION

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, 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

Received: June 15, 2019

Peer-review started: June 19, 2019

First decision: September 9, 2019

Revised: September 21, 2019

Accepted: September 25, 2019

Article in press: September 25, 2019

Published online: October 26, 2019

P-Reviewer: Firstenberg MS

S-Editor: Zhang L

L-Editor: Wang TQ

E-Editor: Liu JH



For patients with chest pain, it is necessary to consider the possibility of foreign body in the esophagus or even in the heart. Careful history taking and the corresponding inspection can help to avoid unnecessary damage and safeguard patients from unnecessary pain.

Key words: Chest pain; Acute myocardial infarction; Pericardial effusion; Fish bone; Case report

©The Author(s) 2019. Published by Baishideng Publishing Group Inc. All rights reserved.

Core tip: Chest pain is a symptom causing more attention by clinicians, and the common reasons include acute coronary events, aortic dissection, pulmonary embolism and so on, while that caused by esophageal foreign body is relatively rare. We present herein, a rare case of acute chest pain as the chief complaint that was diagnosed as acute myocardial infarction initially, then developed cardiac tamponade and severe shock, and was finally diagnosed as fish bone-induced myocardial injury by surgery. This case highlights the possibility of foreign body in the esophagus or even in the heart for patients with acute chest pain.

Citation: Wang QQ, Hu Y, Zhu LF, Zhu WJ, Shen P. Fish bone-induced myocardial injury leading to a misdiagnosis of acute myocardial infarction: A case report. *World J Clin Cases* 2019; 7(20): 3335-3340

URL: <https://www.wjgnet.com/2307-8960/full/v7/i20/3335.htm>

DOI: <https://dx.doi.org/10.12998/wjcc.v7.i20.3335>

INTRODUCTION

Chest pain is the early symptom of numerous life-threatening disease processes. The most common causes of acute chest pain (ACP) are acute coronary events (acute myocardial infarction or angina), aortic dissection, and pulmonary embolism. ACP caused by esophageal foreign body is relatively rare^[1]. Most patients with ACP are accurately diagnosed and promptly treated based on the individual histories, blood biochemical tests, or imaging examination. Herein, we report the case of a patient with ACP as the chief complaint that was ultimately diagnosed as fish bone-induced myocardial injury.

CASE PRESENTATION

Chief complaints

A 56-year-old man suffering from chest pain presented at the Emergency Department of our hospital on October 25, 2015. The patient's symptoms lasted for nine hours with persistent episodes of chest pain, which have especially worsened over the last 2 h.

History of past illness

The patient had no previous medical history.

Personal and family history

None.

Physical examination

The patient's temperature was 36.6 °C, heart rate was 120 bpm, respiratory rate was 23 breaths per minute, blood pressure was 97/70 mmHg, and the oxygen saturation in room air was 98%. Heart sounds were very faint and rales were heard in both lungs. All other signs were negative.

Laboratory examinations

The patient's blood tests showed elevations in cardiac troponin-I (CTN-I) (0.34 ng/mL; normal: < 0.05 ng/mL). Electrocardiograph (ECG) revealed ST segment elevation in the precordial leads II, aVF, and V4-V6. No abnormalities were observed on chest computed tomography (CT). Acute anterior myocardial infarction was thus

initially considered.

Imaging examinations

The patient received dual antiplatelet agents comprising clopidogrel and aspirin at load dosages and underwent emergency percutaneous coronary angiography under the application of nitrates. The operation showed no stenosis in the left main coronary artery or right coronary artery, and about 50% stenosis in the ostial left anterior descending segment and left circumflex artery.

Further diagnostic work-up

Considering that the lowest blood pressure was 74/40 mmHg and it was not possible to maintain normal blood pressure with the help of dopamine, the patient was transferred to intensive care unit (ICU) for further analysis. Subsequently, he required high doses of norepinephrine to maintain blood pressure. Follow-up bedside cardiac ultrasound showed pericardial effusion (Figure 1A). Pericardial tamponade was considered. The patients then underwent pericardium puncture drainage with some 220 mL pericardial effusion; consequently, the blood pressure increased to 110/75 mmHg, while the CTN-I increased to 2.29 ng/mL. At 18:24 (see Table 1), the symptom of chest pain worsened and the blood pressure was decreasing. Bedside cardiac ultrasound revealed a large number of pericardial blood clots prompting cardiac tamponade (Figure 1B). Our medical team including cardiology, ICU, and thoracic surgery, taking into consideration the unexplained hemopericardium, decided to perform emergency thoracotomy and pericardium exploratory surgery with the prior consent from patients' relatives at 19:57. During the operation, the sharp foreign body, a long fish bone measuring about 3.7 cm (Figure 2), was found at the surface of the pericardium and penetrating the left ventricular myocardium to some blood vessels.

FINAL DIAGNOSIS

Finally, the patient was diagnosed with fish bone-induced myocardial injury.

TREATMENT

After removing the fish bone and mending the damaged blood vessels, the patient returned to ICU at 20:55. Reviewing the initial chest CT at local hospital (Figure 3), a strip-shaped high-density shadow at the bottom of the esophagus was found. After being repeatedly inquired of the medical history, the patient admitted to eating fish at dinner, but could not recall swallowing a fish bone.

OUTCOME AND FOLLOW UP

The postoperative course was uneventful and CTN-I fell to 0.25 ng/mL. The patient was successfully extubated on day 3, transferred to thoracic surgery department next day, and discharged in good clinical condition after half a month.

DISCUSSION

Acute myocardial infarction or angina is the most common cause of ACP, which is mainly diagnosed by using ECG and blood biochemical test^[2]. In our case, the patient was misdiagnosed with acute myocardial infarction. His emergency percutaneous coronary angiography was negative. Bedside cardiac ultrasound showed pericardial effusion and pericardium puncture drainage improved the circulation. Nevertheless, persistent pericardial bleeding, unclear bleeding causes, and clot formation led to poor drainage, eventually resulting in worsening of cardiac tamponade symptoms. Considering the possibility of coronary artery injury and lack of the capability of emergency coronary artery bypass at our hospital, our medical team was highly concerned that thoracotomy hemostasis would significantly increase the risk for the patient, while he was reaching the condition when it was no longer safe for him to be transferred to another hospital. We conferred with the patient's family and obtained their consent for emergency exploratory thoracotomy. Finally, a diagnosis of fish bone leading to pericardial bleeding was confirmed.

Our patient was extremely lucky to survive this penetrating heart injury. Actually, in retrospect to the whole treatment, there are still many aspects worth reflecting on:

Table 1 Timeline

Date	Time	Event
10.24	19:00	Acute chest pain
10.24-10.25	19:00-04:00	Local hospital
10.25	04:00-06:00	Emergency Department of our hospital
	06:00-07:17	Emergency percutaneous coronary angiography
	07:17-11:05	Progressive circulation and respiration failure
	11:05	Transferred to Intensive Care Unit
	12:00	Pericardiocentesis
	12:00-18:24	Progressive cardiac tamponade
	19:57-20:55	Emergency thoracotomy and pericardium exploratory surgery
	20:55	Return to Intensive Care Unit
	20:55-23:30	Hemodynamic stabilization
10.28		Extubated tracheal intubation
10.29		Transferred to Thoracic Surgery Department
11.12		Discharged

First, the primary clinician failed to adequately and carefully examine the patient's history. The existing literature shows that ACP caused by ingested fish bone resulting in esophageal or cardiac injury is not relatively uncommon^[3-5]. Foreign body ingestion is an important diagnostic clue. Thus, the diagnostic challenge we faced with this patient was that he could not recall swallowing a fish bone, which partly contributed to the initial misdiagnosis. Second, chest CT examination is the preferred technique for suspected esophageal foreign body^[9]. In this case, the patient underwent CT examination at a local hospital; however, the clinicians failed to observe a high-density shadow in the lower esophagus. Moreover, the primary clinician at our hospital did not personally read the chest CT, which further contributed to the misdiagnosis. Finally, we failed to timely recheck chest CT, cardiac ultrasound and so on after negative results of emergency coronary angiography, which led to further deterioration of the patient's condition.

Therefore, for patients with chest pain, it is necessary to consider the possibility of foreign body in the esophagus or even in the heart. Careful history taking and the corresponding inspection can help to avoid unnecessary damage and safeguard patients from unnecessary pain.

CONCLUSION

Foreign body is a very rare cause of chest pain. Careful history taking and the corresponding inspection can help to avoid unnecessary damage and safeguard patients from unnecessary pain.

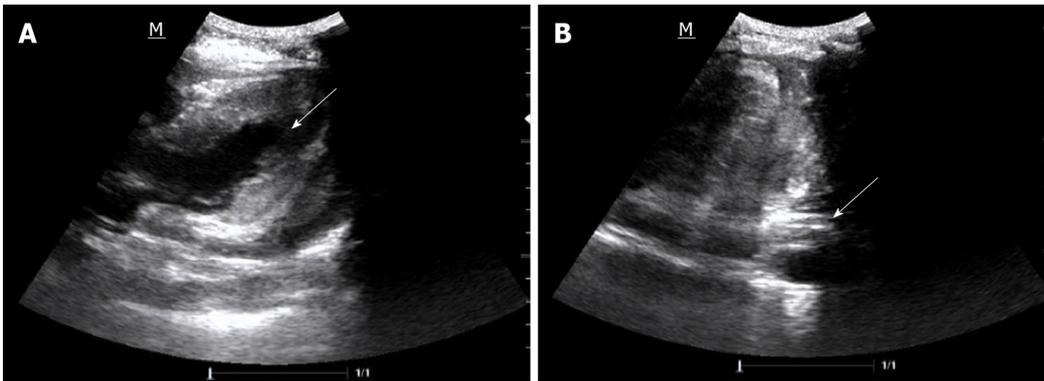


Figure 1 Bedside cardiac ultrasound images. A: Pericardial effusion (arrow); B: A large number of pericardial blood clots (arrow).



Figure 2 The fish bone 3.7 cm in size.

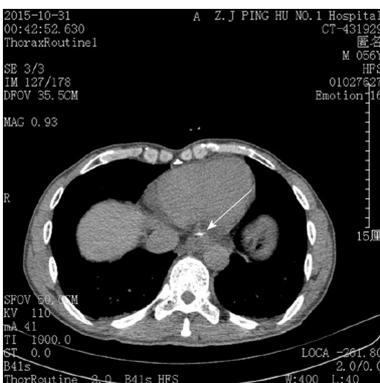


Figure 3 Chest computed tomography image. A strip-shaped high-density shadow was visible at the bottom of the esophagus (arrow).

REFERENCES

- 1 Goodacre S, Cross E, Arnold J, Angelini K, Capewell S, Nicholl J. The health care burden of acute chest pain. *Heart* 2005; **91**: 229-230 [PMID: 15657244 DOI: 10.1136/hrt.2003.027599]
- 2 Fothergill NJ, Hunt MT, Touquet R. Audit of patients with chest pain presenting to an accident and emergency department over a 6-month period. *Arch Emerg Med* 1993; **10**: 155-160 [PMID: 8216586 DOI: 10.1136/emj.10.3.155]
- 3 Hokama A, Uechi K, Takeshima E, Kobashigawa C, Iraha A, Kinjo T, Kishimoto K, Kinjo F, Fujita J. A fish bone perforation of the esophagus. *Endoscopy* 2014; **46** Suppl 1: E216-E217 [PMID: 24806364 DOI: 10.1055/s-0034-1364952]
- 4 Kunishige H, Myojin K, Ishibashi Y, Ishii K, Kawasaki M, Oka J. Perforation of the esophagus by a fish bone leading to an infected pseudoaneurysm of the thoracic aorta. *Gen Thorac Cardiovasc Surg* 2008; **56**: 427-429 [PMID: 18696212 DOI: 10.1007/s11748-008-0266-3]
- 5 Sharland MG, McCaughan BC. Perforation of the esophagus by a fish bone leading to cardiac tamponade. *Ann Thorac Surg* 1993; **56**: 969-971 [PMID: 8215678 DOI: 10.1016/0003-4975(93)90368-r]
- 6 Kawakami M, Chigira H, Nitta S, Sato H, Takahashi H, Nakada T. Pyopneumothorax due to perforation

- of the esophagus with an ingested fish bone. A case report. *Sci Rep Res Inst Tohoku Univ Med* 1978; **25**: 1-4 [PMID: 570301]
- 7 **Jougon J**, Minniti A, Moralès P, Laurent F, Velly JF. Retroesophageal hematoma caused by fish bone perforation of the esophagus. *Asian Cardiovasc Thorac Ann* 2002; **10**: 280-281 [PMID: 12213761 DOI: 10.1177/021849230201000324]
- 8 **Chen MF**, Lou XJ, Yu XQ, Hu DL, Lu J, Jin HW, Ji ZZ, He HX. One case of a fish bone penetrating the esophageal wall into the heart. *Zhonghua Xiaohua Neijing Zazhi* 2012; **29**: 73-73 [DOI: 10.3760/cma.j.issn.1007-5232.2012.02.004]
- 9 **Birk M**, Bauerfeind P, Deprez PH, Häfner M, Hartmann D, Hassan C, Hucl T, Lesur G, Aabakken L, Meining A. Removal of foreign bodies in the upper gastrointestinal tract in adults: European Society of Gastrointestinal Endoscopy (ESGE) Clinical Guideline. *Endoscopy* 2016; **48**: 489-496 [PMID: 26862844 DOI: 10.1055/s-0042-100456]



Published By Baishideng Publishing Group Inc
7041 Koll Center Parkway, Suite 160, Pleasanton, CA 94566, USA
Telephone: +1-925-2238242
E-mail: bpgoffice@wjgnet.com
Help Desk: <https://www.f6publishing.com/helpdesk>
<https://www.wjgnet.com>

