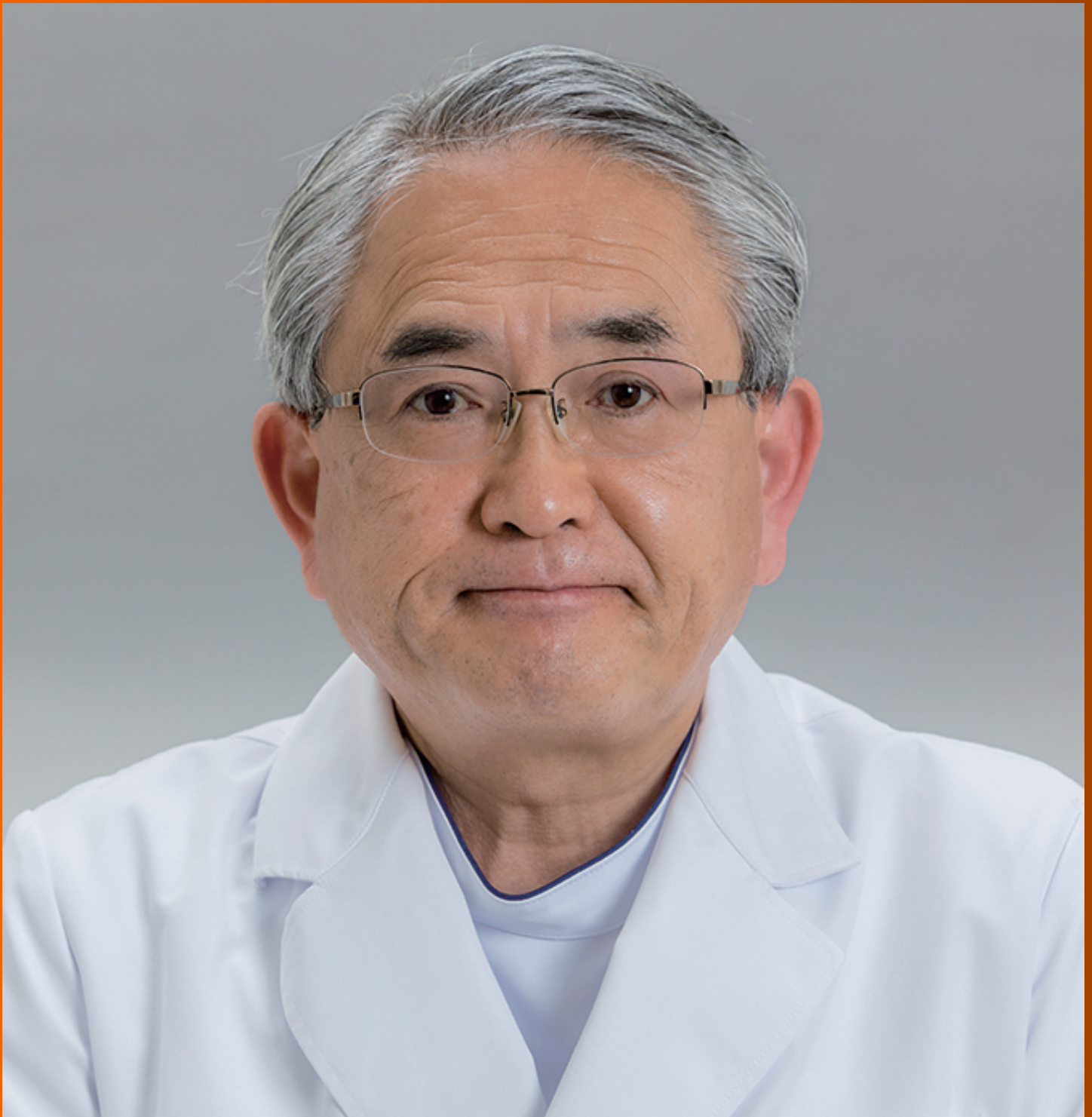


World Journal of *Gastroenterology*

World J Gastroenterol 2024 July 7; 30(25): 3126-3184



EDITORIAL

- 3126 Large non-pedunculated colorectal polyp management: The elephant in the room
Jiang SX, Shahidi N
- 3132 Alanine aminotransferase as a risk marker for new-onset metabolic dysfunction-associated fatty liver disease
Wang D, Zhou BY, Xiang L, Chen XY, Feng JX
- 3140 Refining the targeted population and achieving better for colorectal cancer screening
Zhou NY, Lin YX, Chen LX, Ye LS, Hu B
- 3143 Quantitative assessment of self-management in patients with non-alcoholic fatty liver disease: An unmet clinical need
Borriello R, Esposito G, Mignini I, Gasbarrini A, Zocco MA
- 3147 Risk of hepatic decompensation from hepatitis B virus reactivation in hematological malignancy treatments
Barone M
- 3152 Double-nylon purse-string suture technique: Another addition to the endoscopist's toolbox for full-thickness defect closure
Walia A, Trasolini RP, Shahidi N

ORIGINAL ARTICLE**Retrospective Study**

- 3155 Computed tomography-based radiomics combined with machine learning allows differentiation between primary intestinal lymphoma and Crohn's disease
Xiao MJ, Pan YT, Tan JH, Li HO, Wang HY
- 3166 Predicting hepatocellular carcinoma: A new non-invasive model based on shear wave elastography
Jiang D, Qian Y, Gu YJ, Wang R, Yu H, Dong H, Chen DY, Chen Y, Jiang HZ, Tan BB, Peng M, Li YR

LETTER TO THE EDITOR

- 3179 Scale offers the possibility of identifying adherence to lifestyle interventions in patients with non-alcoholic fatty liver disease
Liu CQ, Hu B
- 3182 Back to the drawing board: Overview of the next generation of combination therapy for inflammatory bowel disease
Lowell JA, Farber MJ, Sultan K

ABOUT COVER

Editorial Board Member of *World Journal of Gastroenterology*, Kentaro Yoshioka, MD, PhD, Director, Center for Liver Diseases, Meijo Hospital, Nagoya 460-0001, Aichi, Japan. kyoshiok8@gmail.com

AIMS AND SCOPE

The primary aim of *World Journal of Gastroenterology* (WJG, *World J Gastroenterol*) is to provide scholars and readers from various fields of gastroenterology and hepatology with a platform to publish high-quality basic and clinical research articles and communicate their research findings online. WJG mainly publishes articles reporting research results and findings obtained in the field of gastroenterology and hepatology and covering a wide range of topics including gastroenterology, hepatology, gastrointestinal endoscopy, gastrointestinal surgery, gastrointestinal oncology, and pediatric gastroenterology.

INDEXING/ABSTRACTING

The WJG is now abstracted and indexed in Science Citation Index Expanded (SCIE), MEDLINE, PubMed, PubMed Central, Scopus, Reference Citation Analysis, China Science and Technology Journal Database, and Superstar Journals Database. The 2024 edition of Journal Citation Reports® cites the 2023 journal impact factor (JIF) for WJG as 4.3; Quartile: Q1. The WJG's CiteScore for 2023 is 7.8.

RESPONSIBLE EDITORS FOR THIS ISSUE

Production Editor: *Hua-Ge Yu*; Production Department Director: *Xu Guo*; Cover Editor: *Jia-Ru Fan*.

NAME OF JOURNAL

World Journal of Gastroenterology

ISSN

ISSN 1007-9327 (print) ISSN 2219-2840 (online)

LAUNCH DATE

October 1, 1995

FREQUENCY

Weekly

EDITORS-IN-CHIEF

Andrzej S Tarnawski

EXECUTIVE ASSOCIATE EDITORS-IN-CHIEF

Xian-Jun Yu (Pancreatic Oncology), Jian-Gao Fan (Chronic Liver Disease), Hou-Bao Liu

EDITORIAL BOARD MEMBERS

<http://www.wjgnet.com/1007-9327/editorialboard.htm>

PUBLICATION DATE

July 7, 2024

COPYRIGHT

© 2024 Baishideng Publishing Group Inc

PUBLISHING PARTNER

Shanghai Pancreatic Cancer Institute and Pancreatic Cancer Institute, Fudan University
Biliary Tract Disease Institute, Fudan University

INSTRUCTIONS TO AUTHORS

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

GUIDELINES FOR ETHICS DOCUMENTS

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

GUIDELINES FOR NON-NATIVE SPEAKERS OF ENGLISH

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

PUBLICATION ETHICS

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

PUBLICATION MISCONDUCT

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

POLICY OF CO-AUTHORS

<https://www.wjgnet.com/bpg/GerInfo/310>

ARTICLE PROCESSING CHARGE

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

STEPS FOR SUBMITTING MANUSCRIPTS

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

ONLINE SUBMISSION

<https://www.f6publishing.com>

PUBLISHING PARTNER'S OFFICIAL WEBSITE

<https://www.shca.org.cn>
<https://www.zs-hospital.sh.cn>

Double-nylon purse-string suture technique: Another addition to the endoscopist's toolbox for full-thickness defect closure

Angad Walia, Roberto Paolo Trasolini, Neal Shahidi

Specialty type: Gastroenterology and hepatology

Provenance and peer review: Invited article; Externally peer reviewed.

Peer-review model: Single blind

Peer-review report's classification

Scientific Quality: Grade A

Novelty: Grade A

Creativity or Innovation: Grade B

Scientific Significance: Grade B

P-Reviewer: Zhang Z, China

Received: March 30, 2024

Revised: May 23, 2024

Accepted: June 11, 2024

Published online: July 7, 2024

Processing time: 93 Days and 2.2 Hours



Angad Walia, Roberto Paolo Trasolini, Neal Shahidi, Department of Medicine, University of British Columbia, Vancouver V6Z2K5, BC, Canada

Corresponding author: Neal Shahidi, MD, PhD, Assistant Professor, Department of Medicine, University of British Columbia, 770-1190 Hornby Street, Vancouver V6Z2K5, BC, Canada. nealshahidi@gmail.com

Abstract

Iatrogenic perforation is the most feared adverse event in endoscopy. With the expansion of interventional endoscopy in favor of traditional surgery, it is now more crucial than ever to develop effective defect closure techniques. This has culminated in the dissemination of multiple novel closure technologies, including through-the-scope clips, over-the-scope clips, through-the-scope suturing and over-the-scope suturing devices. In this editorial, we comment on the recent publication by Wang and colleagues discussing the performance of the double-nylon purse-string suture technique in the closure of large (> 3 cm) gastric full-thickness defects. This technique offers a promising, practical and cost-effective approach to closure of large full-thickness defects that can be readily implemented across diverse healthcare settings.

Key Words: Cancer; Endoscopy; Endoscopic full-thickness resection; Perforation

©The Author(s) 2024. Published by Baishideng Publishing Group Inc. All rights reserved.

Core Tip: Endoscopic full-thickness resection requires effective defect closure. In the recent publication by Wang and colleagues, they demonstrate that a novel double-nylon purse-string suture technique is a promising, practical and cost-effective approach for full-thickness defect closure.

Citation: Walia A, Trasolini RP, Shahidi N. Double-nylon purse-string suture technique: Another addition to the endoscopist's toolbox for full-thickness defect closure. *World J Gastroenterol* 2024; 30(25): 3152-3154

URL: <https://www.wjgnet.com/1007-9327/full/v30/i25/3152.htm>

DOI: <https://dx.doi.org/10.3748/wjg.v30.i25.3152>

INTRODUCTION

Iatrogenic perforation is the most feared adverse event in endoscopy; with reported incidence rates in diagnostic esophagogastroduodenoscopy and colonoscopy of 0.03% and 0.06%, respectively[1-3]. Although the expansion of interventional endoscopy in recent decades has improved patient outcomes and resource utilization it has emphasized the importance of effective defect closure due to the heightened risk of perforation[1,4]. Nowhere is this more apparent than in endoscopic full-thickness resection (EFTR). When applied to gastric subepithelial lesions (SELs), EFTR requires creation of an intentional full-thickness defect in order to achieve R0 resection[5].

DEFECT CLOSURE TECHNIQUES

Multiple defect closure technologies have now been developed including through-the-scope clips (TTSC), over-the-scope clips (OTSC), through-the-scope suturing (TTSS) and OTSC[1,6,7]. This coincides with current consensus guidelines advocating for a first-line endoscopic treatment strategy for iatrogenic perforation management, in preference to surgical intervention[8]. In this issue, Wang *et al*[9] investigated the performance of a double-nylon purse-string suture technique for the closure of large (> 3 cm) gastric full-thickness defects, following EFTR of gastric SELs. In a retrospective evaluation of 85 patients, all full-thickness defects were successfully closed without surgical treatment. No serious adverse events were noted, with fever (15.3%) and pain (16.5%) noted frequently post-procedure. Surveillance esophagogastroduodenoscopy, at 3-month, 6-month and 12-month intervals noted no evidence of recurrence. These results show that the double-nylon purse-string suturing technique is a promising extension of conventional closure technology for EFTR of gastric SELs.

Where effective intraprocedural perforation closure is becoming increasingly necessary, the innovation of novel defect closure techniques is welcomed. Hayashi[10] first described endoscopic clip closure in 1975, sparking the widespread dissemination of TTSC. The performance of TTSC for iatrogenic perforations has been well-defined[6,11]. However, TTSC do have limitations including opening width and the need for sequential TTSCs. These limitations were aimed to be addressed by OTSC, whereby using a “bear claw” firing mechanism allows for successful defect closure (< 3 cm) with potentially a single OTSC. However, OTSC requires removal and reinsertion of the endoscope, which increases procedure time and the potential risk of peritoneal contamination[11]. Most recently, TTSS and over-the-scope suturing (OTSS) (X-Tack Technology; Overstitch Technology; Apollo Endosurgery; Boston Scientific: Marlborough, Massachusetts, United States) have emerged as novel strategies for defect closure[12,13]. The X-Tack platform is a TTSS device involving four 5-mm surgical steel helix tacks strung on a 3-0 polypropylene suture which can cinch to close large (> 3 cm) defects; similar to the ones described by Wang *et al*[9]. Given the novel nature of this device, studies with long-term outcomes are necessary, however recent studies show encouraging results, noting complete closure of large perforations with the absence of adverse events[12,13]. The Overstitch endoscopic suturing system involves a needle driver at the tip of the endoscope and a catheter-based suture anchor to allow full-thickness suturing that is subsequently cinched for closure of larger (> 3 cm) defects. Studies have begun to test the safety and efficacy of this technology with promising reports, although generalizable outcomes in non-expert centers remain unknown.

CLINICAL IMPLICATIONS

Given their findings, the authors advocate for the double-nylon purse-string suture technique, as opposed to TTSC, OTSC and the aforementioned endoscopic suturing platforms. Concerns include the ability of TTSC and OTSC to effectively close large (> 3 cm) full-thickness defects, alongside the cost and advanced training to apply TTSS and OTSS. It is clear that comparative analyses are needed, which factor in cost-effectiveness, comparing TTSC, OTSC, TTSS and OTSS; in the hopes of developing a selective algorithm which takes into consideration access to technology, operator expertise, defect location and perforation etiology. However, it is imperative to emphasize the clinical ramifications of unsuccessful defect closure and the morbidity associated with delayed perforation.

CONCLUSION

In conclusion, double-nylon purse-string suture technique shows promise for the closure of large (> 3 cm) full-thickness defects; specifically in endoscopy centers without access to conventional TTSS and OTSS. With the ever-growing movement towards minimally invasive resection techniques, it is imperative for interventional endoscopists to be equipped with the appropriate techniques and practices to safely and effectively achieve defect closure. Double-nylon purse-string technique is an important addition to the arsenal of advanced closure techniques and carries the potential for widespread implementation.

FOOTNOTES

Author contributions: Walia A designed and drafted the article; Trasolini RP and Shahidi N provided critical revision of the article for important intellectual content; Shahidi N provided final approval of the article.

Conflict-of-interest statement: Neal Shahidi: Speaker's Honorarium: Pharmascience, Boston Scientific. Roberto Trasolini: Speaker's Honorarium: Medtronic, Boston Scientific; Consulting: Fractyl Health. Angad Walia: Nothing to disclose.

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 of origin: Canada

ORCID number: Roberto Paolo Trasolini 0000-0001-8059-9807; Neal Shahidi 0000-0002-4536-0515.

S-Editor: Qu XL

L-Editor: A

P-Editor: Yu HG

REFERENCES

- Lee JH, Kedia P, Stavropoulos SN, Carr-Locke D. AGA Clinical Practice Update on Endoscopic Management of Perforations in Gastrointestinal Tract: Expert Review. *Clin Gastroenterol Hepatol* 2021; **19**: 2252-2261.e2 [PMID: 34224876 DOI: 10.1016/j.cgh.2021.06.045]
- Eisen GM, Baron TH, Dominitz JA, Faigel DO, Goldstein JL, Johanson JF, Mallory JS, Raddawi HM, Vargo JJ 2nd, Waring JP, Fanelli RD, Wheeler-Harborough J; American Society for Gastrointestinal Endoscopy. Complications of upper GI endoscopy. *Gastrointest Endosc* 2002; **55**: 784-793 [PMID: 12024128 DOI: 10.1016/S0016-5107(02)70404-5]
- Cha RR, Kim HJ, Lee CM, Lee JM, Lee SS, Cho HJ, Ha CY, Kim HJ, Lee OJ. Clinical characteristics and outcome of iatrogenic colonic perforation related to diagnostic vs. therapeutic colonoscopy. *Surg Endosc* 2022; **36**: 5938-5946 [PMID: 35048189 DOI: 10.1007/s00464-022-09010-6]
- Shahidi N, Bourke MJ. How to Manage the Large Nonpedunculated Colorectal Polyp. *Gastroenterology* 2021; **160**: 2239-2243.e1 [PMID: 33882288 DOI: 10.1053/j.gastro.2021.04.029]
- Deprez PH, Moons LMG, O'Toole D, Gincul R, Seicean A, Pimentel-Nunes P, Fernández-Esparrach G, Polkowski M, Vieth M, Borbath I, Moreels TG, Nieveen van Dijkum E, Blay JY, van Hooft JE. Endoscopic management of subepithelial lesions including neuroendocrine neoplasms: European Society of Gastrointestinal Endoscopy (ESGE) Guideline. *Endoscopy* 2022; **54**: 412-429 [PMID: 35180797 DOI: 10.1055/a-1751-5742]
- Minami S, Gotoda T, Ono H, Oda I, Hamanaka H. Complete endoscopic closure of gastric perforation induced by endoscopic resection of early gastric cancer using endoclips can prevent surgery (with video). *Gastrointest Endosc* 2006; **63**: 596-601 [PMID: 16564858 DOI: 10.1016/j.gie.2005.07.029]
- Kantsevov SV, Bitner M, Hajiyeva G, Mirovski PM, Cox ME, Swope T, Alexander K, Meenaghan N, Fitzpatrick JL, Gushchin V. Endoscopic management of colonic perforations: clips versus suturing closure (with videos). *Gastrointest Endosc* 2016; **84**: 487-493 [PMID: 26364965 DOI: 10.1016/j.gie.2015.08.074]
- Paspatis GA, Arvanitakis M, Dumonceau JM, Barthet M, Saunders B, Turino SY, Dhillon A, Fragaki M, Gonzalez JM, Repici A, van Wanrooij RLL, van Hooft JE. Diagnosis and management of iatrogenic endoscopic perforations: European Society of Gastrointestinal Endoscopy (ESGE) Position Statement - Update 2020. *Endoscopy* 2020; **52**: 792-810 [PMID: 32781470 DOI: 10.1055/a-1222-3191]
- Wang SS, Ji MY, Huang X, Li YX, Yu SJ, Zhao Y, Shen L. Double-nylon purse-string suture in closing postoperative wounds following endoscopic resection of large (≥ 3 cm) gastric submucosal tumors. *World J Gastroenterol* 2024; **30**: 1143-1153 [PMID: 38577185 DOI: 10.3748/wjg.v30.i9.1143]
- Hayashi T. The study on stanch clips for the treatment by endoscopy. *Gastroenterol Endosc* 1975; **17**: 92-101 [DOI: 10.11280/gee1973b.17.92]
- Bar-Yishay I, Shahidi N, Gupta S, Vosko S, van Hattem WA, Schoeman S, Sidhu M, Tate DJ, Hourigan LF, Singh R, Moss A, Raftopoulos SC, Brown G, Zanati S, Heitman SJ, Lee EYT, Burgess N, Williams SJ, Byth K, Bourke MJ. Outcomes of Deep Mural Injury After Endoscopic Resection: An International Cohort of 3717 Large Non-Pedunculated Colorectal Polyps. *Clin Gastroenterol Hepatol* 2022; **20**: e139-e147 [PMID: 33422686 DOI: 10.1016/j.cgh.2021.01.007]
- Mahmoud T, Wong Kee Song LM, Stavropoulos SN, Alansari TH, Ramberan H, Fukami N, Marya NB, Rau P, Marshall C, Ghandour B, Bejjani M, Khashab MA, Haber GB, Aihara H, Antillon-Galdamez MR, Chandrasekhara V, Abu Dayyeh BK, Storm AC. Initial multicenter experience using a novel endoscopic tack and suture system for challenging GI defect closure and stent fixation (with video). *Gastrointest Endosc* 2022; **95**: 373-382 [PMID: 34695421 DOI: 10.1016/j.gie.2021.10.018]
- Ge PS, Thompson CC. The Use of the Overstitch to Close Perforations and Fistulas. *Gastrointest Endosc Clin N Am* 2020; **30**: 147-161 [PMID: 31739961 DOI: 10.1016/j.giec.2019.08.010]



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

Telephone: +1-925-3991568

E-mail: office@baishideng.com

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

<https://www.wjgnet.com>

