

## When to remove a lumen-apposing metal stent for pancreatic fluid collections?



Dear Editor:

We read with great interest the article by Willems P and colleagues [1] reporting a retrospective investigation of the timing of lumen-apposing metal stent (LAMS) removal during endoscopic ultrasound-guided treatment of pancreatic fluid collections (PFCs). In an analysis of 108 consecutive patients, early ( $\leq 4$  weeks) stent removal was associated with a lower clinical success rate compared to late ( $> 4$  weeks) stent removal (70% vs. 96%, respectively). The risk of clinical failure associated with early stent removal persisted after the vigorous adjustment of multiple confounding factors. The findings would help us to consider and standardise the treatment algorithm for this patient population.

Patients with difficult-to-treat PFC lesions are more likely to undergo prolonged stent placement and thus be categorised as the late removal group. Given this bias due to the retrospective study design, the findings of the high clinical success rate associated with prolonged stent placement were considered striking. Here, we commend the authors for providing additional information for a better understanding and clinical application of these results. First, what were the major reasons for clinical failures in the early stent removal group? Clinical failures may occur due to multiple factors including endoscopically inaccessible lesions, exacerbating infection, and procedure-related adverse events. In the current study, endoscopic necrosectomy was required more frequently in the early removal group. In our previous multicentre study [2], walled-off necrosis was associated with a lower clinical success rate compared to pseudocysts. Therefore, we are interested in how the association of LAMS removal timing with clinical outcomes differed by the levels of internal necrosis (walled-off necrosis vs. pseudocysts or the percentage of necrosis). Second, was a LAMS replaced with

plastic stent(s) to avoid LAMS-related adverse events and ensure the continuous drainage effect, as conducted at some centres [3,4]? If a LAMS was replaced with plastic stent(s) in the early stent removal group, technical difficulties in subsequent endoscopic necrosectomy might result in a high propensity for technical failure. Based on the clinically relevant insights from the current study, we should optimise the duration of LAMS placement during EUS-guided treatment of PFCs. The current study examined a single cut-off point (i.e., four weeks); hence, future studies should examine various cut-off points and determine the optimal duration of LAMS placement [5].

In conclusion, this study points to the risk of clinical failure associated with premature LAMS removal during endoscopic management of PFCs. A better understanding of the mechanism through which early LAMS removal increases the risk of clinical failure would facilitate the designation of a new treatment protocol. It is also important to identify subgroups at high risk of clinical failure due to early removal. If the results are validated, we endoscopists will be prompted to conduct a prospective randomised trial to elucidate the optimal duration of LAMS placement and improve clinical outcomes of patients with PFCs.

### Acknowledgement

The authors would like to appreciate the following members of the WONDERFUL (WON and peripancreatic fluid collection) study group for their valuable comments on the manuscript: Tsuyoshi Hamada, Department of Gastroenterology, Graduate School of Medicine, The University of Tokyo, Tokyo, Japan; Mamoru Takenaka, Department of Gastroenterology and Hepatology, Faculty of Medicine, Kindai University, Osaka, Japan; Hideyuki Shiomi, Division of Gastroenterology and

Hepatobiliary and Pancreatic Diseases, Department of Internal Medicine, Hyogo Medical University, Hyogo, Japan; Ichiro Yasuda, Third Department of Internal Medicine, University of Toyama, Toyama, Japan.

### Conflict of Interest

Y.N. and H.I. acknowledge research grants and honoraria from Boston Scientific Japan. This paper was not funded by this company. No other conflicts of interest exist. The other authors declare that they have no conflicts of interest.

### Funding Information

Japanese Foundation for Research and Promotion of Endoscopy  
This work was supported in part by research grants from the Japanese Foundation for Research and Promotion of Endoscopy (to T.S. and Y.N.). The funder had no role in the design, the decision to publish, or the preparation of the manuscript.

### The authors

**Tomotaka Saito<sup>1</sup>, Takuji Iwashita<sup>2</sup>, Shunsuke Omoto<sup>3</sup>, Yousuke Nakai<sup>4,1</sup>, Hiroyuki Isayama<sup>5</sup>**

- 1 Department of Gastroenterology, Graduate School of Medicine, The University of Tokyo, Bunkyo-ku, Japan
- 2 First Department of Internal Medicine, Gifu University Hospital, Gifu, Japan
- 3 Department of Gastroenterology and Hepatology, Faculty of Medicine, Kindai University, Osaka, Japan
- 4 Department of Endoscopy and Endoscopic Surgery, The University of Tokyo Hospital, Tokyo, Japan
- 5 Department of Gastroenterology, Juntendo University School of Medicine, Graduate School of Medicine, Bunkyo-ku, Japan

## Corresponding author

### Yousuke Nakai, MD, PhD

The University of Tokyo Hospital,  
Department of Endoscopy and Endoscopic  
Surgery, 7-3-1 Hongo, Bunkyo City, 113-  
8655 Tokyo, Japan  
ynakai-tky@umin.ac.jp

## Publication note

Letters to the editor do not necessarily represent the opinion of the editor or publisher. The editor and publisher reserve the right to not publish letters to the editor, or to publish them abbreviated or in extracts.

## References

- [1] Willems P, Esmail E, Paquin S et al. Safety and efficacy of early versus late removal of LAMS for pancreatic fluid collections. *Endosc Int Open* 2024; 12: E1–e2  
doi:10.1055/a-2226-0840
- [2] Saito T, Omoto S, Takenaka M et al. Risk factors for adverse outcomes at various phases of endoscopic ultrasound-guided treatment of pancreatic fluid collections: data from a multi-institutional consortium. *Dig Endosc* 2023; doi:10.1111/den.14683
- [3] Bang JY, Mel Wilcox C, Arnoletti JP et al. Importance of Disconnected Pancreatic Duct Syndrome in Recurrence of Pancreatic Fluid Collections Initially Drained Using Lumen-Apposing Metal Stents. *Clin Gastroenterol Hepatol* 2021; 19: 1275–1281. e1272
- [4] Téllez-Aviña FI, Casasola-Sánchez LE, Ramírez-Luna M et al. Permanent Indwelling Transmural Stents for Endoscopic Treatment of Patients With Disconnected Pancreatic Duct Syndrome: Long-term Results. *Journal of clinical gastroenterology* 2018; 52: 85–90
- [5] Nakai Y, Hamada T, Saito T et al. Time to think prime times for treatment of necrotizing pancreatitis: Pendulum conundrum. *Dig Endosc* 2023; 35: 700–710  
doi:10.1111/den.14598

## Bibliography

*Endosc Int Open* 2024; 12: E996–E997

DOI 10.1055/a-2308-3777

ISSN 2364-3722

© 2024. The Author(s).

This is an open access article published by Thieme under the terms of the Creative Commons Attribution-NonDerivative-NonCommercial License, permitting copying and reproduction so long as the original work is given appropriate credit. Contents may not be used for commercial purposes, or adapted, remixed, transformed or built upon. (<https://creativecommons.org/licenses/by-nc-nd/4.0/>)

Georg Thieme Verlag KG, Rüdigerstraße 14,  
70469 Stuttgart, Germany

