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Adverse events of lumen-apposing stents for pancreatic fluid collections: opening Pandora's box

To the Editor:

We read with great interest the article by Fugazza et al,[1] retrospectively evaluating the occurrence of adverse events (AEs) in 304 patients with pancreatic pseudocysts (PCs) (153) and walled-off necrosis (WON) (151) treated with lumen-apposing metal stents (LAMSs). Seventy-four (24.3%) patients experienced 79 AEs, of which bleeding (22), stent migration (20), stent occlusion (14), and infection (19) were the most frequently observed. At multivariate analysis, WON and lack of pneumatic tract dilation were the only statistically significant risk factors associated with AEs.[1]

The high rate of AEs observed raises some serious considerations about the use of LAMSs in patients with both PCs and WON, especially in view of the lack of well-designed studies that can guide their proper use in this clinical setting.[2-5] Indeed, it opens Pandora's box, with many unanswered questions suddenly coming out: (1) Which stent should be used in both PCs and WON? (2) Are LAMSs cost effective in the treatment of PCs and WON? (3) Which stent size should be used for both PCs and WON? (4) Which patients with WON should undergo direct necrosectomy through the LAMS? (5) Should a double-pigtail stent be placed through the LAMS to avoid bleeding once the collection is resolving?

In the only available randomized controlled study published so far comparing double-pigtail stents versus LAMSs in patients with WON, treatment success, clinical AEs, readmission, and length of hospital stay were similar in both groups.[6] However, stent-related AEs and procedural costs were significantly higher in the LAMS group.

The time for large randomized controlled studies has thus arrived to close back Pandora's box and find the best solutions to reach the highest clinical success rates with the lowest AEs, and in the most cost-effective way in patients with both PCs and WON.

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Response:

We thank Rizzatti et al[1] for their comments on our work entitled "International multicenter comprehensive analysis of adverse events associated with lumen-apposing metal stent placement for pancreatic fluid collection drainage," recently published in *Gastrointestinal Endoscopy*.[2] Indeed, in their letter, some important questions about the current knowledge of pancreatic fluid collection (PFC) endoscopic management are raised, and most of them do not yet have a definitive answer. We fully agree with the authors that several uncertainties persist in this field, in particular about the use of lumen-apposing metal stents (LAMSs) for PFC drainage. Indeed, this was the main reason that led us to develop this work. Nevertheless, we believe that our data helped advance the understanding of some mechanisms underlying the occurrence of adverse events (AEs) in these patients and remarked the need of countermeasures to prevent and treat such events. In particular, pneumatic dilation of the LAMSs was associated with a lower risk of AEs (infection and stent occlusion) without increasing the risk of stent migration or dislodgement. Moreover, patients with walled-off necrosis emerge as a high-risk subgroup, therefore deserving targeted studies aimed at defining the specific mechanisms of AEs. In this regard, bleeding has been already attributed to friction of the distal flange of the LAMS against retroperitoneal vessels after cavity collapse, and this was considered a delayed event.[3] Interestingly, we found that most bleeding episodes (13/22, 59%) occurred in the first 14 days from the positioning of the LAMS, thus suggesting that a further reduction in the timing of LAMS removal should be considered. Many other points have not yet been completely addressed, including the pressing issue of the cost effectiveness of such procedures.[4-6] For this reason, as already underlined in the conclusions of our article, we agree with the conclusion of Rizzatti et al[1] about the urgent need for well-designed controlled trials that give a more solid basis to our clinical practice.

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Randomized studies for Barrett's ablation: identifying the most cost-effective solutions by keeping an open mind

To the Editor:

We would like to respond to the editorial by van Munster et al,[1] which accompanied our pilot trial (BRIDE) comparing argon plasma coagulation (APC)