

(17.5%) during follow-up endoscopy (median of 5 weeks). Our observations, in conjunction with those recently reported by Aburajab et al,<sup>1</sup> raise important issues. For one, we must recognize that walled-off necrosis (WON) and PPs behave differently. By definition, a PP is devoid of any solid material and should be expected to resolve promptly after LAMS placement. Therefore, unlike cases of WON, for which interval imaging is generally performed at 4 to 6 weeks,<sup>2-4</sup> earlier imaging (perhaps even as early as 1 week), followed by stent removal upon PP resolution, may be appropriate. Prompt follow-up endoscopy with removal of the LAMS reduces the risk of delayed adverse events and may even potentially eliminate the need to place DPs altogether. Given the wide variation in our endoscopic approach for PP drainage, future randomized controlled studies are urgently needed to help establish best practice consensus.

**Dennis Yang, MD**

**Peter V. Draganov, MD**

*Division of Gastroenterology, Hepatology, and Nutrition  
University of Florida  
Gainesville, Florida, USA*

## REFERENCES

1. Aburajab M, Smith Z, Khan A, et al. Safety and efficacy of lumen-apposing metal stents with and without simultaneous double-pigtail plastic stents for draining pancreatic pseudocysts. *Gastrointest Endosc* 2018;87:1248-55.
2. Sharaiha RZ, Tyberg A, Khashab MA, et al. Endoscopic therapy with lumen-apposing metal stents is safe and effective for patients with pancreatic walled-off necrosis. *Clin Gastroenterol Hepatol* 2016;14:1797-803.
3. Siddiqui AA, Kowalski TE, Loren DE, et al. Fully covered self-expanding metal stents versus lumen-apposing fully covered self-expanding metal stent versus plastic stents for endoscopic drainage of pancreatic walled-off necrosis: clinical outcomes and success. *Gastrointest Endosc* 2017;85:758-65.
4. Guo J, Saftoui A, Vilmann P, et al. A multi-institutional consensus on how to perform endoscopic ultrasound-guided peri-pancreatic fluid collection drainage and endoscopic necrosectomy. *Endosc Ultrasound* 2017;6:285-91.

<https://doi.org/10.1016/j.gie.2018.01.020>

## Response:



We thank Drs Yang and Draganov<sup>1</sup> for their comments on our study<sup>2</sup> wherein we evaluated the safety and efficacy of lumen-apposing metal stents (LAMSs) with and without simultaneously placing double-pigtail stents for draining pancreatic pseudocysts (PPs). In an unpublished multicenter study using LAMSs to drain PPs, the authors observed LAMS occlusion in 17.5% of patients at a median of 5 weeks.<sup>1</sup> These results are similar to the results in our patients who presented with cyst cavity infection (17.4%) within 30 days after LAMSs were placed to drain PPs. In some of these patients, solid unchewed

food material was seen in the cyst cavity. To prevent solid food material from occluding the LAMS or from entering the cavity, we started simultaneously placing a 10F double-pigtail stent coaxially through the LAMS and demonstrated a reduction in the PP infection rate. As an alternative approach, because PP by definition has only liquid material, Yang et al<sup>1</sup> suggest removing the LAMS sooner (eg, within a week) to prevent delayed adverse events of stent occlusion with solid food material. This approach, as the authors state, may eliminate the need to place double-pigtail stents altogether. Although that approach is intuitively attractive, we do not know what will be the impact of removing the LAMS within a week of placement when the fistulous tract is not yet mature. First, will this lead to a higher PP recurrence rate? Second, solid food material can enter the PP cavity even within a week. Will removing the LAMS sooner lead to higher infection rates, especially if the fistula collapses? Do we have to give dietary advice to these patients, such as stay on a liquid diet until the cyst resolves and the LAMS is removed? As the authors state, we also strongly recommended prospective, randomized, controlled studies to establish a best-practice consensus when LAMSs are used to drain pancreatic pseudocysts.

**Kulwinder S. Dua, MD**

*Division of Gastroenterology and Hepatology  
Medical College of Wisconsin  
Milwaukee, Wisconsin, USA*

## REFERENCES

1. Yang D, Draganov PV. The silence of the LAMS. *Gastrointest Endosc* 2018;87:1596-7.
2. Aburajab M, Smith Z, Khan A, et al. Safety and efficacy of lumen-apposing metal stents with and without simultaneous double-pigtail plastic stents for draining pancreatic pseudocysts. *Gastrointest Endosc* 2018;87:1248-55.

<https://doi.org/10.1016/j.gie.2018.01.039>

## Pancreas cyst fluid viscosity assessment in the diagnosis of mucinous cysts



To the Editor:

We read with interest the article by Krishna et al<sup>1</sup> about the use of EUS-guided needle-based confocal laser endomicroscopy (nCLE) in differentiating between mucinous and nonmucinous pancreatic cysts. They reported a cohort of patients with 16 mucinous and 13 nonmucinous pancreas cysts to assess the performance characteristics of EUS-guided nCLE, which was found to have a high accuracy. However, in our experience, nCLE is a very expensive evaluation method for daily practice. In differentiating between mucinous and

nonmucinous pancreas cysts, determination of the viscosity of the cyst fluid may be useful. One method for this is string sign testing.<sup>2</sup>

We are concerned about the accuracy of Table 2, which compares the demographics, EUS features, and fluid characteristics between mucinous and nonmucinous pancreatic cystic lesions.<sup>1</sup> On the line of dilatation of the main pancreatic duct, they report that there were 8 cases in both groups with a significant difference. However, the number of patients with nonmucinous cysts with main pancreatic duct dilatation must be zero instead of 8 to represent statistical significance. The second concern is in the viscosity section. Please clarify whether the *P* value describes the differences among all 3 categories or only the line for “thin/watery.”

**Ibrahim Hakkı Köker, MD**  
**Hakan Şentürk, MD**  
 Gastroenterology Department  
 Medicine Faculty  
 Bezmialem Vakif University  
 Istanbul, Turkey

#### REFERENCES

1. Krishna SG, Brugge WR, Dewitt JM, et al. Needle-based confocal laser endomicroscopy for the diagnosis of pancreatic cystic lesions: an international external interobserver and intraobserver study (with videos). *Gastrointest Endosc* 2017;86:644-54.
2. Bick BL, Enders FT, Levy MJ, et al. The string sign for diagnosis of mucinous pancreatic cysts. *Endoscopy* 2015;47:626-31.  
<https://doi.org/10.1016/j.gie.2018.01.006>

#### Response:



We thank Drs Köker and Şentürk<sup>1</sup> for reading our article about interobserver and intraobserver variations in evaluating needle-based confocal laser endomicroscopy for differentiating mucinous versus non-mucinous pancreatic cystic lesions (PCLs).<sup>2</sup> There are typographical errors in Table 2, which need correction. These corrections are included in the corrected Table 2, seen in the erratum, page 1599.

Specifically, in Table 2, there were “zero” patients with main pancreatic duct dilation under the nonmucinous PCL category. Under the row addressing viscosity, we have included all 3 variables (thin/watery, slightly viscous, and thick pasty) for the calculation of the *P* value. The new *P* value is .04 and remains statistically significant.

**Somashekar Krishna, MD, MPH**

*Sections of Pancreatic Disorders and Advanced Endoscopy  
 Division of Gastroenterology, Hepatology, and Nutrition  
 The Ohio State University Wexner Medical Center  
 Columbus, Ohio, USA*

#### REFERENCES

1. Köker IH, Şentürk H. Pancreas cyst fluid viscosity assessment in the diagnosis of mucinous cysts. *Gastrointest Endosc* 2018;87:1597-8.
2. Krishna SG, Brugge WR, Dewitt JM, et al. Needle-based confocal laser endomicroscopy for the diagnosis of pancreatic cystic lesions: an international external interobserver and intraobserver study (with videos). *Gastrointest Endosc* 2017;86:644-54.  
<https://doi.org/10.1016/j.gie.2018.03.007>