

Safety of lumen-apposing stent with or without coaxial plastic stent for endosonography-guided drainage of pancreatic fluid collections: Time to randomize!

Referring to Puga M et al. p. 1022–1026



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This issue of *Endoscopy* features a study by Puga et al. evaluating the safety of using a coaxial double-pigtail plastic stent with a lumen-apposing metal stent (LAMS) compared with the use of a LAMS alone in the endoscopic management of pancreatic fluid collections [1]. The study is a retrospective review of 41 patients and concludes that using a double-pigtail plastic stent within the LAMS versus use of a LAMS alone is associated with a lower rate of adverse events (10% vs. 42%). Despite the limitations of the study, it may open a window for a preventive technique that reduces the occurrence of adverse events related to LAMS insertion.

“This clearly demonstrates the need for a larger study, with a randomized controlled design and defined parameters, to assess the utility of double-pigtail plastic stents in minimizing adverse events related to LAMS insertion.”

In recent years the rise of endoscopic management of pancreatic fluid collections, has almost completely replaced other modalities such as surgery and percutaneous drainage.

LAMSs have contributed significantly to this paradigm shift, by offering increased technical and clinical success for drainage of pancreatic fluid collections, as well as facilitating direct endoscopic necrosectomy. However adverse events, including bleeding, infection, stent migration, and buried stent syndrome, have remained a major concern. Siddiqui et al. reported an early adverse events rate of 11/86 (13%) using LAMS [2] and Lang et al. showed a rate of 4/19 (21%) for bleeding [3]. Stecher et al. found a rate of 17% for adverse events with LAMS use [4]. Furthermore, in a recent meta-analysis by Hammad et al. that included 11 studies, the weighted pooled rate for adverse events was 13% (9% to 20%) [5].

All these reports have shown a lower rate of complications compared to that described by Puga et al., but emphasize the need to distinguish between adverse events related to the procedure, to the LAMS, and to the disease process. Indeed, bleeding itself can be related to the puncture of a vessel in the path to the fluid collection, to LAMS-induced vessel erosion, or to formation of a pseudoaneurysm in the setting of complicated pancreatic necrosis. The puncture of a vessel during drainage of a fluid collection is a rare adverse event since the rise of echoendoscopic drainage. The formation of a pseudoaneurysm is inherent to the disease itself and can sometimes be detected

by cross-sectional imaging prior to drainage. The erosion of a vessel by the LAMS is the most pertinent issue in the study by Puga et al. Vessel erosion by the LAMS is a valid concern and has led many endoscopists to place a double-pigtail stent in order to create a buffer between the LAMS and the vessel. This assumes that plastic double-pigtail stents induce less erosion compared to LAMSs. If intuitively this makes sense, it remains to be confirmed in a prospective fashion.

However, this raises more questions about the design of this type of study. For instance, how long should the LAMS be left in place? How many double-pigtails should be placed? How is resolution of the pancreatic fluid collection defined? When should the pancreatic duct be explored, and what is the role of hydrogen peroxide in the debridement process?

This clearly demonstrates the need for a larger study, with a randomized controlled design and defined parameters, to assess the utility of double-pigtail plastic stents in minimizing adverse events related to LAMS insertion. Until then endoscopists should be aware of the current rates of adverse events and of the different techniques to deal with such events if they want to safely manage pancreatic fluid collections.

Competing interests

None

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