Pediatric application of a lumen-apposing metal stent for transgastric pancreatic abscess drainage and subsequent necrosectomy

A 14-year-old boy presented to our care with severe necrotizing pancreatitis secondary to a psychiatric medication. He had developed walled-off pancreas necrosis (WOPN) in the body of the pancreas that had become infected, as evidenced by air within a 10-cm collection on computed tomography (CT) scanning, fevers to 102 °F, tachycardia, and leukocytosis.

The CT scan showed the collection had a mature wall that abutted the stomach (**Fig. 1**). Endoscopic ultrasound (EUS)-guided (GF-UCT180; Olympus America, Center Valley, Pennsylvania, USA) transgastric drainage was therefore performed in the endoscopy suite with carbon dioxide insufflation being used. First, a cystogastrostomy tract was created and dilated under endoscopic and fluoroscopic guidance, after which a 10-mm lumen-apposing metal stent (AXIOS; Boston Scientific, Marlborough, Massachusetts, USA) was placed. The stent drained 1000 mL of frank pus that was suctioned out, which was consistent with the collection being an abscess (**Fig. 2**; **Video 1**). The patient's fever, tachycardia, and leukocytosis resolved.

After 1 week the patient returned for endoscopic necrosectomy to be performed through the stent (**Fig. 3a**). Necrotic debris was removed from the pancreatic cavity using a grasper, Roth net, and snare (**Fig. 3b**). Only one endoscopic necrosectomy session was required to clean the pancreatic collection of debris. Subsequent imaging 6 weeks later showed resolution of the WOPN (**Fig. 4**) and, 8 weeks after its initial placement, the stent was removed endoscopically. The patient continues to do well.

This case demonstrates that a lumen-apposing metal stent can be used safely in the pediatric population for pancreatic abscess drainage and subsequent necrosectomy. Recently fully covered lumen-apposing metal stents have been created for drainage of pancreatic collections [1]. There is limited literature on the use of these stents in the pediatric population with, to our knowledge, only one case having been reported in the literature [2]. This case adds to the pediatric literature

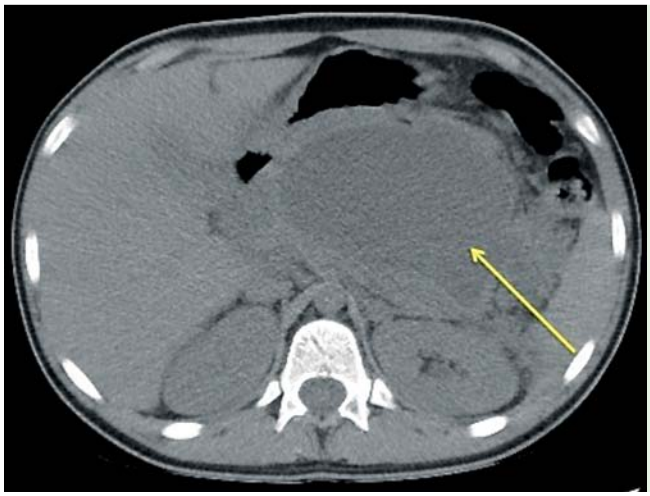

Fig. 1 Computed tomography (CT) scan showing the pancreatic collection (arrow) abutting the stomach prior to endoscopic drainage.

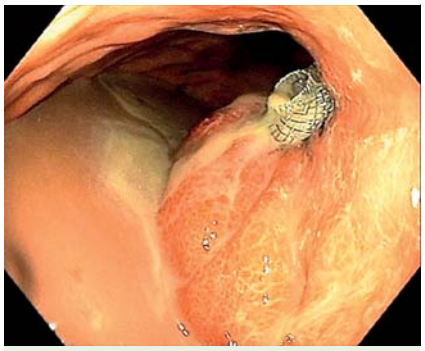

Fig. 2 Endoscopic view showing frank pus draining through the lumen-apposing metal stent into the stomach.

Video 1

Video showing placement of a transgastric lumen-apposing stent in a pediatric patient that resulted in drainage of a pancreatic abscess and subsequently allowed endoscopic necrosectomy to be performed.

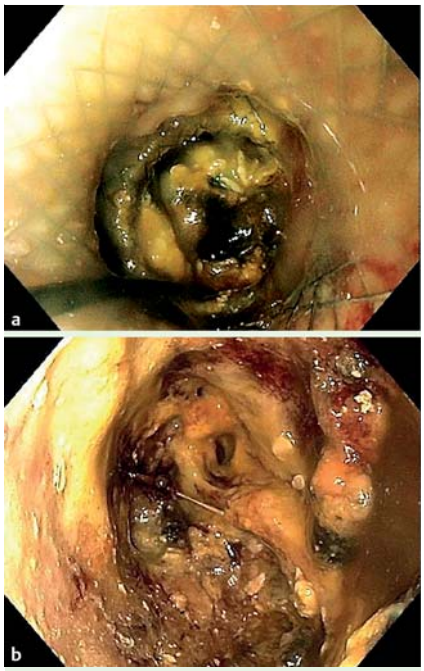

Fig. 3 Views during endoscopy performed 7 days after stent placement showing: a necrotic material within the pancreatic collection seen through the lumen-apposing stent; b the pancreatic cavity after removal of the debris.

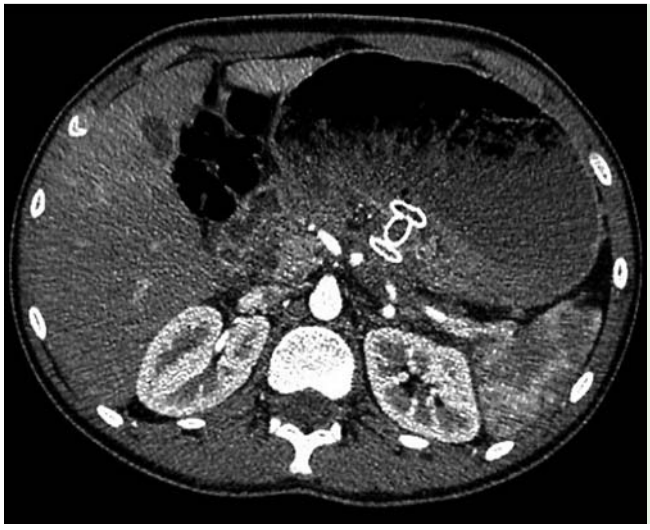

Fig. 4 Computed tomography (CT) scan showing the markedly improved appearance of the pancreas 6 weeks after the drainage and necrosectomy procedure.

suggesting that the use of these stents can be safe, feasible, and efficacious.

Endoscopy_UCTN_Code_TTT_1AR_2AI

Competing interests: None

Arvind J. Trindade[1,2], Sumant Inamdar[1], Samuel Bitton[2]

[1] Division of Gastroenterology, Hofstra Northwell School of Medicine, Long Island Jewish Medical Center, Northwell Health System, New Hyde Park, New York, USA

[2] Department of Pediatric Gastroenterology, Hofstra Northwell School of Medicine, Cohen Children's Medical Center, Northwell Health System, New Hyde Park, New York, USA

References

1 *Siddiqui AA, Adler DG, Nieto J* et al. EUS-guided drainage of peripancreatic fluid collections and necrosis by using a novel lumen-apposing stent: a large retrospective, multicenter U.S. experience (with videos). Gastrointest Endosc 2016; 83: 699 – 707

2 *Giefer MJ, Balmadrid BL.* Pediatric application of the lumen-apposing metal stent for pancreatic fluid collections. Gastrointest Endosc. Epub ahead of print 2016. doi: 10.1016/j.gie.2016.01.045

Bibliography

DOI http://dx.doi.org/10.1055/s-0042-108573
Endoscopy 2016; 48: E204–E205

ISSN 0013-726X

Corresponding author
Arvind J. Trindade, MD
Long Island Jewish Medical Center
Division of Gastroenterology
270-05 76th Ave
New Hyde Park
NY 11040
USA
Fax: +1-718-470-5509
arvind.trindade@gmail.com