

Transpapillary drainage has no added benefit on treatment outcomes in patients undergoing EUS-guided transmural drainage of pancreatic pseudocysts: a large multicenter study



Dennis Yang, MD,¹ Sunil Amin, MD,¹ Susana Gonzalez, MD,¹ Daniel Mullady, MD,² Stephen Hasak, MD,² Srinivas Gaddam, MD,² Steven A. Edmundowicz, MD,² Mark A. Gromski, MD,³ John M. DeWitt, MD,³ Mohamad El Zein, MD,⁴ Mouna A. Khashab, MD,⁴ Andrew Y. Wang, MD,⁵ Jonathan P. Gaspar, MD,⁵ Dushant S. Uppal, MD,⁵ Satish Nagula, MD,⁶ Samir Kapadia, MD,⁶ Jonathan M. Buscaglia, MD,⁶ Juan Carlos Bucobo, MD,⁶ Alex Schlachterman, MD,⁷ Mihir S. Wagh, MD,⁷ Peter V. Draganov, MD,⁷ Min Kyu Jung, MD,⁸ Tyler Stevens, MD,⁸ John J. Vargo, MD,⁸ Harshit S. Khara, MD,⁹ Mustafa Huseini, MD,⁹ David L. Diehl, MD,⁹ Rajesh N. Keswani, MD,¹⁰ Ryan Law, DO,¹⁰ Srinadh Komanduri, MD,¹⁰ Patrick S. Yachinski, MD,¹¹ Tomas DaVee, MD,¹¹ Anoop Prabhu, MD,¹² Robert T. Lapp, MD,¹² Richard S. Kwon, MD,¹² Rabindra R. Watson, MD,¹³ Adam J. Goodman, MD,¹⁴ Natasha Chhabra, MD,¹⁴ Wallace J. Wang, MD,¹⁵ Petros Benias, MD,¹⁵ David L. Carr-Locke, MD,¹⁵ Christopher J. DiMaio, MD¹

New York, New York; St. Louis, Missouri; Indianapolis, Indiana; Baltimore, Maryland; Charlottesville, Virginia; Stony Brook, New York; Gainesville, Florida; Cleveland, Ohio; Danville, Pennsylvania; Chicago, Illinois; Nashville, Tennessee; Ann Arbor, Michigan; Los Angeles, California, USA

Background and Aims: The need for transpapillary drainage (TPD) in patients undergoing transmural drainage (TMD) of pancreatic fluid collections (PFCs) remains unclear. The aims of this study were to compare treatment outcomes between patients with pancreatic pseudocysts undergoing TMD versus combined (TMD and TPD) drainage (CD) and to identify predictors of symptomatic and radiologic resolution.

Methods: This is a retrospective review of 375 consecutive patients with PFCs who underwent EUS-guided TMD from 2008 to 2014 at 15 academic centers in the United States. Main outcome measures included TMD and CD technical success, treatment outcomes (symptomatic and radiologic resolution) at follow-up, and predictors of treatment outcomes on logistic regression.

Results: A total of 375 patients underwent EUS-guided TMD of PFCs, of which 174 were pseudocysts. TMD alone was performed in 95 (55%) and CD in 79 (45%) pseudocysts. Technical success was as follows: TMD, 92 (97%) versus CD, 35 (44%) ($P = .0001$). There was no difference in adverse events between the TMD (15%) and CD (14%) cohorts ($P = .23$). Median long-term (LT) follow-up after transmural stent removal was 324 days (interquartile range, 72-493 days) for TMD and 201 days (interquartile range, 150-493 days) ($P = .37$). There was no difference in LT symptomatic resolution (TMD, 69% vs CD, 62%; $P = .61$) or LT radiologic resolution (TMD, 71% vs CD, 67%; $P = .79$). TPD attempt was negatively associated with LT radiologic resolution of pseudocyst (odds ratio, 0.11; 95% confidence interval, 0.02-0.8; $P = .03$).

Conclusions: TPD has no benefit on treatment outcomes in patients undergoing EUS-guided TMD of pancreatic pseudocysts and negatively affects LT resolution of PFCs. (Gastrointest Endosc 2016;83:720-9.)

(footnotes appear on last page of article)

Pancreatic fluid collections (PFCs) caused by pancreatic duct (PD) disruption can develop as a consequence of acute or chronic pancreatitis, pancreatic surgery, and



Use your mobile device to scan this QR code and watch the author interview. Download a free QR code scanner by searching "QR Scanner" in your mobile device's app store.

trauma.¹⁻³ Pancreatic pseudocysts are a type of PFC characterized by a well-encapsulated fluid collection with minimal to no necrotic debris. Although pseudocysts develop in up to 20% of cases of acute pancreatitis, most of these resolve spontaneously.⁴ Treatment is warranted in the setting of persistent symptoms or adverse events. Symptoms, including abdominal pain, early satiety, jaundice, or weight loss, are often due to luminal (gastric or duodenal) and/or biliary obstruction. Pseudocyst superinfection can lead to abscess

formation and thus represents an absolute indication for drainage.⁵

Endoscopic transmural drainage (TMD) has become the first-line therapy for symptomatic pancreatic pseudocysts given its similar efficacy, shorter recovery times, fewer adverse events, and improved cost-effectiveness compared with surgical cystogastrostomy.⁶ This technique involves the creation of a communication between the pseudocyst and the gastroduodenal lumen (cystogastrostomy or cystoduodenostomy), allowing the internal drainage and collapse of the pseudocyst.⁷ With technical advances in endoscopy, conventional endoscopic drainage has largely been replaced with EUS-guided TMD because the latter is associated with higher technical success and lower adverse event rates, especially in the absence of a visible endoscopic bulge.^{8,9}

The role of transpapillary drainage (TPD) in patients with pancreatic pseudocysts undergoing TMD remains unclear. Theoretically, TPD through the placement of a PD endoprosthesis across the site of a leak/disruption may facilitate healing by bypassing the defect and allowing direct flow of the pancreatic secretions into the duodenum. However, the current data on combined TMD and TPD (CD) is scarce and inconsistent. Hookey et al¹⁰ performed endoscopic drainage of PFCs in 116 patients and reported no significant difference in clinical success rates between patients who underwent TMD alone (90.6%) compared with those who underwent CD (82.9%). Furthermore, a higher recurrence rate was observed in patients with PFC drained by a combined approach (26.8%) versus TMD only (8.3%; $P = .015$). In contrast, in a separate retrospective study of PFC drainage, Trevino et al¹¹ reported that patients who underwent a combined approach (TMD and TPD with a bridging PD stent) were more likely to have treatment success than patients who did not undergo PD stenting during TMD (97.5% vs 80%; adjusted risk ratio, 1.14; 95% confidence interval [CI], 1.01-1.29; $P = .036$).

The primary aim of this multicenter, retrospective study was to compare treatment outcomes in patients with pancreatic pseudocysts who underwent EUS-guided TMD alone versus CD. A secondary objective was to identify factors associated with successful clinical outcomes in the endoscopic management of pseudocysts.

METHODS

This multicenter retrospective study included all consecutive patients 18 years of age and older who underwent attempted EUS-guided PFC drainage at 15 academic tertiary referral centers in the United States between January 2008 and September 2014. Patients were identified through prospectively maintained endoscopic databases and chart review. All data were extracted and compiled in a central database. Informed procedural consents were obtained from all patients. This study was

approved by the institutional review board for human research at each of the participating institutions. All endoscopic procedures were performed according to the American Society for Gastrointestinal Endoscopy (ASGE) practice guideline recommendations on antibiotic prophylaxis and management of antithrombotic agents and coagulopathy.^{12,13}

Data collection was separated into 3 categories: baseline, procedural, and postprocedural data. Baseline data of interest included patient demographics, etiology of pancreatitis, presence of chronic pancreatitis, characteristics of PFC, and findings on index imaging before drainage. Procedure-related data included technical aspects for both TMD and TPD. Relevant EUS-guided TMD data included method of cystoenterostomy tract creation, route of drainage, placement of nasocystic drain, and type and number of transmural stent(s) used. Endoscopic retrograde pancreatography (ERP) data included findings on the pancreatogram and type of ERP intervention performed when applicable. All procedure-related adverse events were reviewed. Postprocedural data included duration of follow-up, need for additional intervention(s), and treatment outcomes.

Definitions

PFCs were classified according to the revised Atlanta classification as acute peripancreatic fluid collection, pseudocysts, acute necrotic collection, or walled-off necrosis.¹ Adverse events were assessed based on previously established criteria by the ASGE.¹⁴ Patients were divided into 2 groups: TMD alone versus CD. Patients in the TMD group underwent EUS-guided TMD only, whereas those in the CD group underwent ERP with attempted TPD in addition to TMD (Fig. 1). TMD technical success was defined as successful placement of a minimum of 1 transmural stent during PFC drainage. TPD technical success was defined as completion of the intended diagnostic and/or therapeutic ERP. CD technical success constituted both TMD and TPD technical success. Symptom resolution was defined as the complete absence of any symptoms, including pain, gastric outlet obstruction, biliary obstruction, and/or infection. Radiologic resolution was defined as the complete resolution of the pseudocyst on repeat imaging at the time of follow-up.

Main outcome measures

The primary aim of the study was to compare symptomatic and radiologic resolution in patients with pancreatic pseudocysts who underwent TMD alone versus CD. A secondary aim was to identify potential clinical predictors of symptoms, radiologic resolution of PFC, and/or adverse events after endoscopic drainage.

Follow-up

Treatment outcome measures were evaluated at both short-term (ST) and long-term (LT) follow-up. ST follow-up was defined as an interval of 2 weeks or longer

Download English Version:

<https://daneshyari.com/en/article/3301709>

Download Persian Version:

<https://daneshyari.com/article/3301709>

[Daneshyari.com](https://daneshyari.com)