

Endoscopic Ultrasound-Guided Versus Percutaneous Drainage for the Management of Post-Operative Pancreatic Fluid Collections After Distal Pancreatectomy

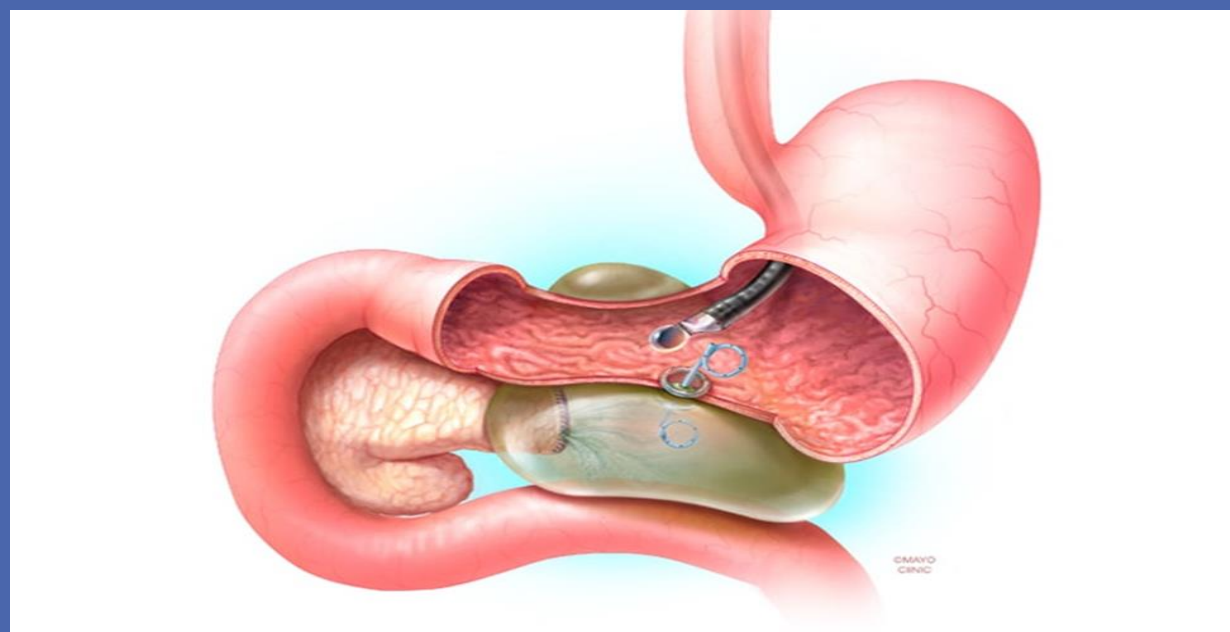
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In this large retrospective comparative study, endoscopic ultrasound-guided drainage when compared to percutaneous drainage for post operative pancreatic fluid collection was associated with:

- ❖ Higher rates of clinical success
- ❖ Fewer interventions &
- ❖ Lower rates of fluid recurrence

Endoscopic ultrasound guided drainage should be considered for management of post operative fluid collection in centers with technical expertise.



Take a picture to request the full poster, abstract, and references



INTRODUCTION

Post-operative pancreatic fluid collections (POPFCs) remain a significant source of morbidity after distal pancreatectomy with an incidence of 40-60%. Drainage can be performed using percutaneous (PTD) or endoscopic (EUSD) approaches, but comparative data are limited.

OBJECTIVES

To compare rates of clinical success between the EUSD with PTD. Secondary outcomes included technical success, total number of interventions, time to resolution, rates of adverse events (AEs), and POPFC recurrence.

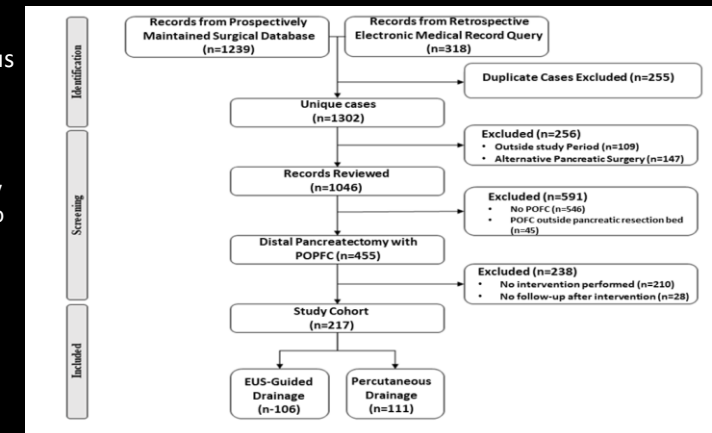
METHODS

- **Study Type:** Single Academic Center Retrospective Cohort Study
- **Timeframe:** January 2012 to August 2021
- **Inclusion Criteria:** Patients included in the study were;
 - Patients aged ≥ 18 years old who underwent distal pancreatectomy in the inclusion timeframe and subsequently developed symptomatic POPFCs in the pancreatic resection bed.
- **Exclusion Criteria:** Patients excluded were;
 - Age < 18 years old
 - Underwent pancreatic surgery other than distal pancreatectomy (e.g., pancreaticoduodenectomy, pancreatic enucleation, total pancreatectomy)
 - Had asymptomatic POPFCs
 - Post-operative fluid collection outside the pancreatic resection bed.
 - Had surgery outside the inclusion period were excluded.

Definition of Terms

- **Clinical Success:** defined as symptomatic improvement and radiographic resolution of POPFC to < 2 cm in greatest dimension without the need for an alternate drainage modality.
- **Intervention:** defined as any procedure that involved stent placement, removal, or adjustment, including tract dilation, additional stent(s) insertion, and direct endoscopic necrosectomy.
- **Fluid recurrence:** defined as recurrence of symptoms and new fluid collection on cross-sectional imaging within six months post-intervention.

STUDY POPULATION FLOW CHART



RESULTS - Baseline Characteristics

Baseline Characteristics	EUSD N = 106	PTD N = 111	P-value
Age, years, median (IQR)	60 (48-68)	60 (55-68.5)	0.09
Female, no. (%)	52 (49.1)	59 (53.1)	0.54
Laparoscopic surgery, no. (%)	56 (52.8)	34 (30.6)	0.002
Pancreatic pathology, no. (%)	0.44		
Ductal adenocarcinoma	43 (31.1)	40 (29.7)	
Neuroendocrine tumor	32 (30.2)	33 (29.7)	
Intraductal papillary mucinous neoplasm	12 (11.3)	8 (7.2)	
Other*	19 (17.9)	30 (27.0)	
Inpatient, no. (%)	52 (49.1)	92 (82.9)	<0.001
Presence of solid necrosis, no. (%)	48 (45.3)	11 (9.9)	<0.001
Infected POPFC, no. (%)	42 (39.6)	30 (27.0)	0.06
Maximum diameter in cm, Median (IQR)	7.4 (5.2-10.0)	6.7 (5.1-10.0)	0.45
Time to drainage from surgery, days, median (IQR)	27.0 (13.5-46.5)	10.0 (7.00-18.3)	<0.001

RESULTS – Clinical outcomes

	EUSD N=106	PTD N=111	P-Value
Clinical success, no. (%)	98 (92.5)	85 (76.6)	0.001
Technical success, no. (%)	106 (100)	111 (100)	
Procedure related adverse events, no. (%)	11 (10.4)	7 (6.3)	0.28
Number of interventions, median (IQR)	2 (2-4)	4 (2-6)	<0.001
Time to drain removal, days, median (IQR)	45.5 (31.5-73.0)	37.0 (24.0-61.0)	0.013
Recurrence, no. (%)	8 (7.6)	23 (20.7)	0.007

ADVERSE EVENTS

Adverse Events (AE) Severity	Number of Events	EUSD	PTD
Bleeding	4		
Moderate	2		1
Severe	1		
Stent migration	5		
Mild	2		1
Moderate	2		
Stent maldeployment	3		
Mild	1		1
Moderate	1		
Severe	1		
Infection	5		
Mild			2
Moderate	1	1	2
Pancreatitis	1		
Moderate		1	

DISCUSSION

- Prio data has been difficult to interpret due to the retrospective nature of the data along with small and heterogenous cohorts that include a variety of pancreatic resections, variable endoscopic drainage techniques, and addition of fluid collection from walled-off necrosis (WON), and pseudocysts in order to increase sample size.
- To decrease the heterogeneity within our study cohort, we limited inclusion criteria to only patients with POPFC within the pancreatic resection bed after distal pancreatectomy.
- This strict inclusion criteria were felt to reduce variables that may confound the data such as large amount of solid necrosis that are more commonly seen in WON or morphologic features of paracolic extension of the collection

Conclusion

- Endoscopic ultrasound guided drainage should be considered for management of post operative fluid collection in centers with technical expertise.