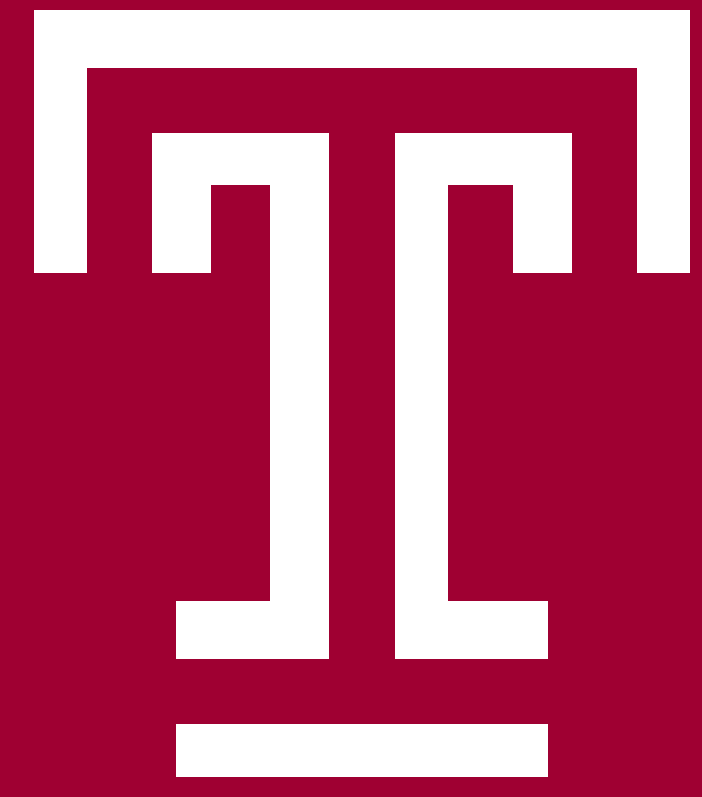


Lumen-Apposing Metal Stents for Pancreatic Fluid Collections Reduce 90-Day Readmission Rates



Jay Patel MD¹, Rishabh Khatri MD¹, Jay Kanaparathi MD¹, Jun Song MD¹, Stephen Heller MD², Woo Jung J. Lee MD², Frank Friedenber MD MS², Saraswathi Cappelle DO²

Temple University Hospital, Department of Medicine¹, Section of Gastroenterology² | Lewis Katz School of Medicine at Temple University, Philadelphia, PA

BACKGROUND

- Management of symptomatic pancreatic fluid collections (PFCs) can involve the use of lumen-apposing metal stents (LAMS)
- LAMS appear to be superior compared to traditional plastic stents however require close follow up
- Numerous studies have shown the short-term benefits of LAMS, however there is a lack of data evaluating longer term outcomes

AIMS

- To investigate 90-day readmission rates after LAMS placement over an 8-year period
- To examine the impact of cyst size and time to stent removal on the rates of complications

METHODS

- We identified all patients ≥ 18 years who underwent deployment of a LAMS from 01/01/2014 to 06/01/2021 at our urban, safety net hospital
- We collected demographic data, cyst characteristics, and stent information
- Follow-up upper endoscopies and imaging were examined to determine stent removal date and assess for complications
- Hospital admission rates 90 days before and after stent placement were collected
- Admissions were stratified into gastrointestinal-related or other

RESULTS

FIGURE 1 – Demographic Data

		Data (N=27)
Mean Age		52.1 \pm 11.0 years
Sex	Male	66.7%
Race	White	33.3%
	Non-white	66.7%
Alcohol Use		59.3%

FIGURE 2 – Pancreatic Fluid Collections and Lumen-Apposing Metal Stents Data

		Data (N=27)
Type of Pancreatic Fluid Collections (PFCs)	Pancreatic Pseudocysts (PP)	66.7%
	Walled-Off Necrosis (WON)	22.2%
	Mixed Collections	11.1%
Median PFC Size		6.0 \pm 1.4 cm
Lumen-Apposing Metal Stents (LAMS) Removal	Removed	81.5%
	Indeterminate / Lost to Follow Up	18.5%
Median Time to LAMS Removal		37.5 \pm 10.0 days
LAMS Complications		22.2%
Type of LAMS Complication	Bleeding	7.4%
	Stent Migration	7.4%
	Stent Occlusion	7.4%

RESULTS

FIGURE 3 – Outcomes Pre and Post Stent Placement

	90 Days Pre-Stent Placement	90 Days Post-Stent Placement	p-value
Mean Number of Hospital Admissions per Patient	1.00 \pm 0.20	0.48 \pm 0.17	p<0.05
Mean Percent of Hospital Admissions with GI Complaints	64.7%	22.2%	p<0.05

FIGURE 4 – Complications

	Patients with Complications	Patients without Complications	p-value
Median Time to Removal (days)	30.0 \pm 27.0	39.0 \pm 9.5	p=0.27
Median PFC Size (cm)	4.9 \pm 2.3	6.1 \pm 1.1	p=0.33

CONCLUSIONS

- LAMS for the management of mature pancreatic fluid collections were effective at reducing 90-day readmission rates especially for GI-related complaints
- Although there was a delay in LAMS removal with a median of 38 days, it was not associated with higher complication rates
- Cyst size was not significantly related to complications
- Perhaps an extended use of LAMS beyond 4 weeks may prove to be safe and efficacious
- Larger studies are required to evaluate the longer-term outcomes of LAMS