Analysis of Off-Label Usage of Lumen Apposing Metal Stents in the GI Tract: A Single Center Experience

Robert Dorrell, Swati Pawa, Girish Mishra, Darius Jahann, Rishi Pawa
Department of Medicine, Division of Gastroenterology and Hepatology, Wake Forest School of Medicine

INTRODUCTION

- Lumen apposing metal stents (LAMS) have revolutionized our approach to pancreatic fluid collections (PFCs).
- The utility of LAMS has been translated into other interventions including EUS-guided gallbladder drainage (EUS-GB), EUS-directed transgastric ERCP (EDGE), EUS-guided transgastric interventions (EDGI), EUS-guided gastrojejunostomy (EUS-GJ), EUS-guided choledochoduodenostomy (EUS-CD), EUS-guided drainage of post-operative collection (EUS-PO) and stricture dilation (SD).
- There is limited research on the use of LAMS for these off-label indications.

METHODS

- All patients who underwent LAMS placement between March 2015-October 2021 were added to a prospectively maintained database.
- Collected data including patients' demographics, procedure details, clinical outcomes, and adverse events was retrospectively reviewed.
- Descriptive statistics were used to summarize our findings.

RESULTS

- A total of 191 patients underwent LAMS placement during the study period.
- Of these, 65 patients had indications outside of drainage of PFCs.
- Average duration of LAMS placement was 36.2 days (SD 8.5).
- Clinical success was achieved in 57/63 patients (90.5%);

	EUS-GBD (n=25)	EDGE (n=6)	EDGI (n=2)	EUS-GJ (n=11)	EUS-CD (n=4)	SD (n=6)	EUS-PO (n=9)	Miscellaneous (n=2)
Age, mean, SD	73.64, 12.0	65.8, 8.1	61.0, 9.9	64.5, 13.0	65.3, 17.0	55.2, 11.75	52.0, 18.5	71, 66
Female gender, n, %	6, 24%	5, 83.3%	1, 50%	2, 18%	3, 75%	5, 83%	2, 22.2%	0, 0%
Indications, n %	Cholecystitis, 22, 88% Malignant biliary obstruction, 3, 12%	Choledocholithiasis (n=4, 66.7%) Benign papillary stenosis (n=2, 33.3%)	Pancreatic mass (n=1, 50%) Pancreatic cyst (n=1, 50%)	Malignant GOO, 11, 100%	Distal malignant biliary obstruction, 4 100%	Anastomotic stricture, 4 (67%) Pyloric stricture, 2 (33%)	Post-operative fluid collections, 9, 100%	Liver abscess, 2, 100%
Technical success, n, %	23, 92.0%	6, 100%	2, 100%	11, 100%	4, 100%	6, 100%	9, 100%	2, 100%
Clinical success, n, %	21/23, 91.3%	6, 100%	2, 100%	11, 100%	4, 100%	3, 50%	8, 88.9%	2, 100%
Procedure duration (min), mean, SD	39.5, 21.7	38.7, 20.0	52, 17.0	66, 31.6	24.5, 13.3	18.7, 3.8	27.3, 9.1	28, 7.1
Adverse events, n, %	4, 18%	0, 0%	1, 50%	0, 0%	0, 0%	1, 16.7%	0, 0%	0, 0%
Length of follow-up (days), mean, SD	47.3, 27.9	208.2, 179.1	240, 144.2	46.50, (28.3, 82.8)	143, 119.9	292, 171.2	565.8, 465.1	43.5, 53.0

CONCLUSION

- LAMS provide an efficient, and safe modality for securing endoscopic access and allowing interventions outside of PFCs.
- The efficacy of LAMS in managing gastrointestinal strictures remains in question.