

Safety and Efficacy of Endoscopic Ultrasound-Guided Gallbladder Drainage Performed by Early Career Advanced Endoscopists: A Multicenter Experience

Nicholas McDonald, M.D.¹, Amir Rumman, M.D.², Maham Hayat, M.D.², Natalie Wilson, M.D.¹, Arjun Sondhi, M.D.³, Munish Ashat, M.D.⁴, Amaninder Dhaliwal, M.D.⁵, Mohamed Abdallah, M.D.¹, Rahman Nakshabendi, M.D.⁶, Corey Miller, M.D.⁷, Mohammad Bilal, M.D.^{1,8}

¹University of Minnesota, Minneapolis, MN, ²University of Oklahoma Health Sciences Center, Oklahoma City, OK, ³Iowa Digestive Disease Center, Clive, IA, ⁴University of Iowa Hospitals and Clinics, Iowa City, IA, ⁵University of South Carolina School of Medicine, ⁶Florida Advanced Gastroenterology Center, Tampa, FL, ⁷McGill University, Montreal, QC, ⁸Minneapolis Veterans Affairs Health Care System, Minneapolis, MN



Introduction

- Endoscopic ultrasound-guided gallbladder drainage (EUS-GBD) using lumen-apposing metal stents (LAMS) has become increasingly common for patients with acute cholecystitis who are not surgical candidates.
- Recent studies have shown EUS-GBD to be safe and effective, however these data come from experienced advanced endoscopists.
- We aimed to evaluate the safety and effectiveness of EUS-GBD performed by early career advanced endoscopists.

Methods

- This was a multicenter, retrospective analysis of all patients who underwent EGBD, performed by 7 early-career advanced endoscopists.
- Early career was defined as being within the first 2 years of graduating advanced endoscopy fellowship.
- Technical success was defined as the ability to place the stent within the gallbladder.
- Clinical success was defined as improvement or resolution of gallbladder related symptoms within 5 days of the procedure.

Indication	N = 21 patients
Acute Cholecystitis	18 (86%)
Symptomatic Cholelithiasis	3 (14%)
Patient characteristics	
Female	10 (48%)
Age	75 years (SD 12)
Inpatient	17 (81%)
Chronic kidney disease	3 (14%)
Diabetes mellitus	11 (52%)
Cirrhosis	1 (5%)
Platelet count (K/cmm)	247 (SD 64)
INR	1.2 (SD 0.22)
Anticoagulation use	8 (38%)
Apixaban	7 (33%)
Enoxaparin	1 (5%)
Procedure characteristics	
Site of Lumen Apposing Metal Stent placement	
Stomach	15 (71%)
Duodenum	6 (29%)
Size of Lumen Apposing Metal Stent	
10 mm x 10 mm	14 (67%)
15 mm x 10 mm	7 (33%)
Outcomes	
Technical success	21 (100%)
Clinical success	21 (100%)
Stent removed	10 (48%; average 41 days)
Recurrent Cholecystitis	0
Length of follow-up (days, median)	75
Adverse events	
Any adverse event	2 (10%)
Need for admission following procedure	1 (5%)
Post-procedural pain within 30-days	1 (5%)
Death within 30-days	0

Table 1. Procedural Characteristics

Results

- A total of 21 patients underwent EUS-GBD.
- The most common indication was acute cholecystitis (86%) and symptomatic cholelithiasis (14%).
- Clinical success was achieved in all 21 cases.
- Technical success was achieved in all 21 cases.
- Further characteristics are summarized in table 1.

Conclusions

- Our findings suggest that endoscopic ultrasound-guided gallbladder drainage is safe and effective in the hands of formally trained early career advanced endoscopists.
- Further study is needed to confirm and validate these findings