EFFICACY OF ENDOLUMINAL STENTING IN THE MANAGEMENT OF SLEEVE GASTRECTOMY LEAKS

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Introduction

Laparoscopic Sleeve Gastrectomy (LSG) is widely adopted as a safe and effective treatment for morbid obesity. Among all potential complications, staple line leakage remains a major adverse event with increased morbidity and prolonged hospital stay. Aside from sepsis control, antibiotics, and nutritional support, endoscopic stent placement is one of the preferred methods in the management of LSG leaks. We evaluated the efficacy and complications of self-expandable metal stents in the treatment of Sleeve Gastrectomy Leaks.

Methodology

Retrospective Review of all patients who were managed for Sleeve Gastrectomy Leaks in a tertiary academic hospital between May 2015 and July 2023. 91 patients were identified. Available data including patient demographics, procedural success and adverse events were collected.

Results

n = 91 Patients

Age (year) – Mean ± SD	36.0 ± 11.4
Sex (female) – N (%)	46 (50.55)
BMI (kg/m2) – Mean ± SD	40.6 ± 13.1
DM – N (%)	18 (19.8)
HTN – N (%)	18 (19.8)
DLP – N (%)	5 (5.5)
Primary Surgery at our institution – N (%)	26 (28.6)
Previous Bariatric Procedure – N (%)	10 (11.0)

Managed for Sleeve Gastrectomy Leak



Time to Presentation with Leak	2.8 weeks
Percutaneous Drainage – N (%)	70 (76.9)
Surgical Washout & Drainage – N (%)	17 (18.7)
TPN – N (%)	58 (63.7)
ICU Admission – N (%)	25 (27.5)

Endoscopic Management Outcomes

❖ **Success** rates after
- ✓ Single stent placement **73.6%**
- ✓ Multiple Non-operative Interventions **92.3%**

Complications	
Stent Migration	20 (21.9%)
Esophageal Stricture/Narrowing	24 (26.4%)
Managed Endoscopically with No Complications	
Stent Related Bleeding	7 (7.7%)
Esophageal Perforation	1 patient on High Dose Steroids

❖ **7 (7.7%) Patients Had Persistent Leak Despite Multiple Endoscopic Interventions All Underwent Successful Surgical Management**
- ✓ 5 Patients Underwent RYGB
- ✓ 1 Patient Required Total Gastrectomy with Roux-En-Y Esophagojejunostomy
- ✓ 1 Patient with big retained fundus underwent resection of fundus and fistula tract

Conclusion

- Prevention is key to avoid Sleeve Gastrectomy leaks, this includes assuring a wide incisura and a uniform shaped sleeve.
- Endoluminal stenting offer a minimally invasive effective option for management of sleeve gastrectomy leaks, they seal the defect, bridge across distal obstruction if present and allow for early oral intake, however, stent complications including migration, bleeding, and esophageal stricture formation are common and theoretically influenced by patient comorbidities, stent size, type and duration.
- Further studies into improving choice of stent type and size is needed to reduce complications.

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