EXPERIENCE IN DIAGNOSIS AND MANAGEMENT OF ANASTOMOTIC LEAKS FOLLOWING ESOPHAGECTOMY: A SINGLE-CENTER DESCRIPTIVE STUDY

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Background

Esophageal Anastomotic Leak (AL) following esophagectomy is a common multifactorial-caused complication that increases morbidity, mortality, and length of stay.[1] The incidence, diagnosis approach, and management has changed over the years.[2] We sought to describe and characterize the diagnosis and management of patients that developed AL at our institution.

Methods

After institutional review board (IRB) approval, we queried our prospectively maintained, institutional, Society of Thoracic Surgeons–based database to identify patients who developed an esophageal AL after esophagectomy from August 2016 through July 2022. Data pertaining to demographics, comorbidities, surgical and oncological characteristics, clinical course, endoscopy, imaging findings, and discharge status were extracted and analyzed.

Results

Population: A total of 173 patients underwent esophagectomy during the study period: 13 transhiatal, 11 three-hole McKeown, 4 with colonic and small bowel interposition, and 145 Ivor Lewis. Of 173 patients, 14 (8.1%) developed an AL.

Diagnosis: The median time to detection was 7.5 days after surgery. The AL was diagnosed by detection of enteric contents from wound drains in 3 cases (21%), endoscopy in 6 (43%), computed tomography in 3 (21%), and barium esophagogram in 2 (14%). Twelve of 14 (86%) patients presented with an increasing white blood cell count, and 11 (79%) showed additional signs of sepsis. Three patients did not present AL-related clinical features; 2 were identified by barium esophagography and 1 by endoscopy.

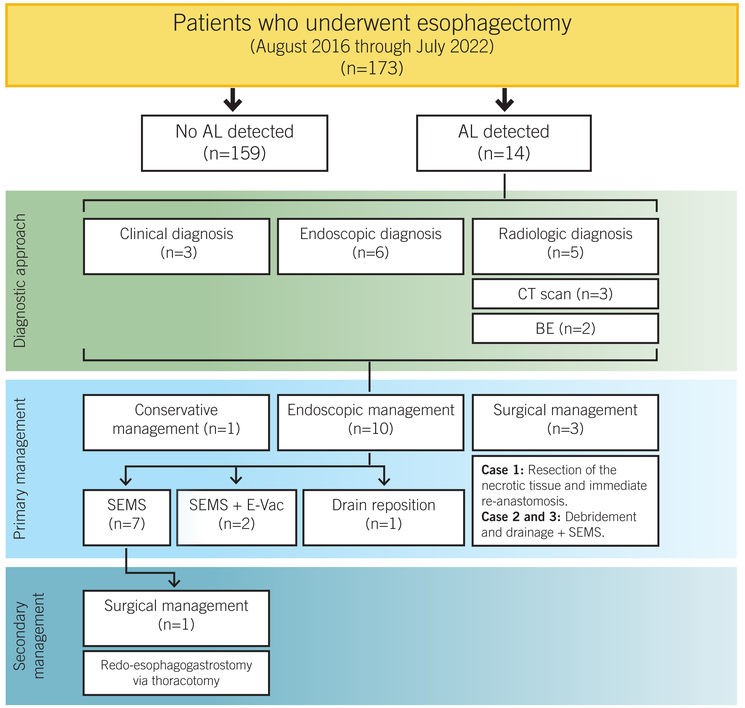


Figure 1. Summary of diagnosis and management of esophageal anastomotic Leaks at Norton Thoracic Institute August 2016 through July 2022. AL: Anastomotic Leak; BE: Barium Esophagogram; SEMS: Self-expandible metal stent; E-Vac: Endoluminal negative pressure therapy.

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Management: All patients received enteral nutritional support, intravenous antibiotics, and antifungals; the median length of antimicrobial therapy was 8 days. Primary treatment of the AL included: endoscopic placement of a self-expanding metal stent (SEMS; n=7); surgery (n=3); SEMS with endoluminal vacuum therapy (n=2); endoscopic drain repositioning (n=1), and no additional treatment (n=1). One patient required surgery after initial SEMS placement.

Surgery as the primary treatment was related to early detection of ALs; however, no increase in length of stay or mortality was observed. The median ICU length of stay was 10 days and the median total hospital length of stay was 21.5 days. There was no 30-day mortality among the cohort.

Conclusion

The incidence of esophageal ALs at our center is in line with other high-volume centers. Most ALs can be managed without re-operative intervention; however, it remains a significant source of post-operative morbidity; nevertheless, advancements in management alternatives have improved the associated mortality. The intervention must be individualized.

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