The Missing Linx: Case Report and Novel Grading System for the Management of Dysphagia in Patients with a LINX device

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Background

Gastroesophageal reflux disease (GERD) is widely prevalent and surgically managed as a last resort.

Reconstruction is a balance between reflux prevention and development of dysphagia.

Magnetic sphincter augmentation (MSA) using the LINX device is a surgical treatment option for GERD.

Case Presentation

We present the case of a 77-year old female who elected to undergo removal of her LINX device due to recurrent, life-altering dysphagia. Endoscopy revealed distal esophageal narrowing with circumferential mucosal changes concerning for impending erosion of the LINX device.

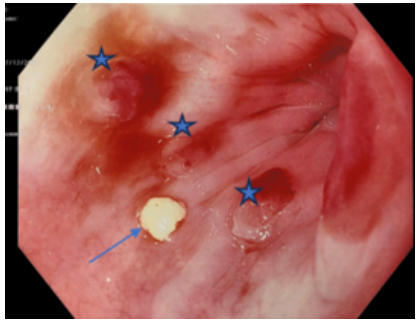


Image 1: Endoscopic Images. Blue arrow identifies retained food products consistent with distal esophageal stenosis. The blue stars mark sites of metallic beads and impending erosion.

In this case, mucosal erosion and impending ulceration could have been missed if the proper diagnostic approach was not taken. Our proposed grading system and treatment guidelines are based on both current literature as well as clinical experience managing patients at a tertiary care, teaching hospital.

Grade	Description	Findings	Treatment
I	Dysphagia or Reflux without other concerning findings	None in EGD or imaging	Conservative Lifestyle Modifications
II	Dysphagia with "radiographic/endoscopic" narrowing	UGI Stenosis Distal esophageal/GE junction stenosis on EGD and UGI	Balloon Dilatation and re-evaluate
III	Dysphagia with impending ulceration	Mucosal changes on upper endoscopy	Elective to urgent LINX removal
IV	Ulceration/Perforation of LINX device	Esophageal perforation on CT imaging Visualization of metallic bead on endoscopy	Emergent LINX removal/Abdominal Exploration

Table 1: Proposed LINX-Dysphagia Grading and Treatment System

Discussion

Management of patients with LINX-dysphagia can be more complex than classical dysphagia, and there are not clear guidelines for diagnosis and treatment. Lack of guidelines can result in delayed or inadequate treatment causing progression of symptoms, reduced quality of life, or the most feared complication – esophageal erosion. We propose a classification and grading system with treatment guidelines based on previous evidence and review of current literature.

Conclusion

Dysphagia after LINX implantation is a common complication with erosion through the esophagus as most feared complication. Guidelines to facilitate management of this clinical entity would prove beneficial to both physician and patients.

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