

A Novel Overtube-assisted Endoscopic Technique for Esophageal Clearance before Performing the POEM Procedure

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ABSTRACT

Adequate esophageal and gastric clearance is essential before peroral endoscopic myotomy (POEM) to minimize aspiration risk and improve procedural safety. We describe a novel overtube-assisted technique using a therapeutic endoscope and standard endoscopic snare for rapid removal of retained food debris and large food chunks from the esophagus and stomach. The overtube provides airway protection, facilitates repeated intubation, and allows efficient retrieval of bulky residues. This method is simple, widely applicable, and does not require a learning curve or specialized accessories. Complete clearance can be achieved within minutes, enabling safe and effective POEM in patients with advanced achalasia.

Keywords: Overtube, Peroral endoscopic myotomy, Snare.

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Adequate clearance of the esophagus and stomach before peroral endoscopic myotomy (POEM) is crucial to reduce the risk of aspiration and to enhance procedural safety. We describe a novel overtube-assisted technique using a therapeutic endoscope and a standard endoscopic snare to remove retained food debris and large boluses from the esophagus and stomach. The overtube provides effective airway protection, allows repeated intubation, and facilitates efficient retrieval of bulky residues. This technique employs a Guardus overtube (outer diameter 9.8–11.7 mm), a therapeutic Olympus endoscope (GIF-H1190F), and conventional endoscopic snares (standard oval-shaped snare of size 15 mm). The overtube is positioned under endoscopic guidance, and the wide working channel of the therapeutic endoscope (2.8 mm) permits

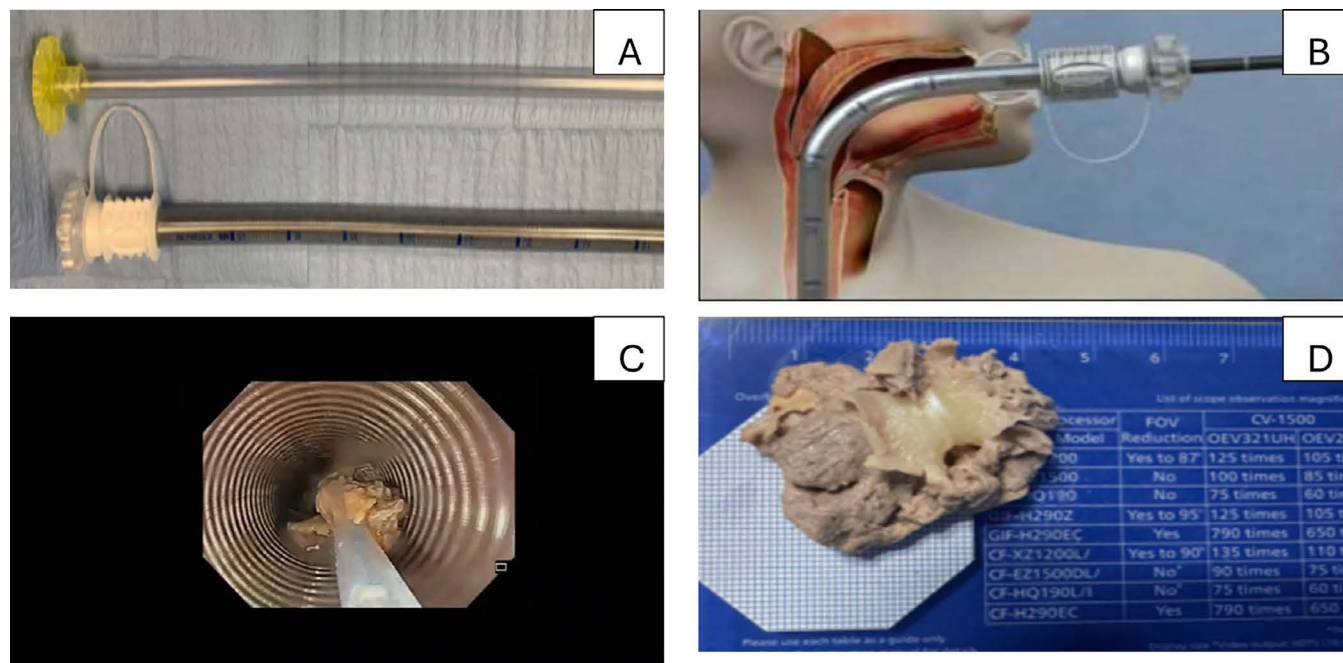
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Figs 1A to D: (A) Guardus overtube used in this technique; (B) Pictorial illustration of overtube introduction under endoscopic guidance; (C) Large food bolus being retrieved from the esophagus using a snare (standard endoscopic oval snare of size 15 mm) introduced through the therapeutic Olympus endoscope (GIF-H1190F) over the Guardus overtube; (D) A 4-cm meat bolus successfully removed using this technique

easy passage of the snare, enabling rapid and safe removal of large food chunks (Figs 1A to D and Supplementary Video S1). In contrast to previously described techniques¹ that combine a slim pediatric scope with a 26F gastric tube—where clearance largely depends on suction force and the narrow working channel limits snare use—our method is simple, widely applicable, and requires no learning curve or specialized accessories. Complete clearance can be achieved within minutes, enabling safe and effective POEM in patients with advanced achalasia. We acknowledge the limitation of this technique: Overtube insertion can be technically challenging in patients with severe esophageal tortuosity or strictures and carries a small risk of mucosal injury. Additionally, its effectiveness has not yet been validated in literature.

DATA AVAILABILITY

Open source.

ACKNOWLEDGMENT

Nil.

AUTHOR CONTRIBUTIONS

GCP: Data collection, editing, conceptualization, data curation, methodology, writing.

LC: Data collection, methodology.

SN: Conceptualization, data curation, methodology, writing.

NSK: Conceptualization, data curation, methodology, writing.

RK: Data curation.

AI DISCLOSURE

This document was not created with assistance from AI tools. The content has been created, reviewed, edited, and verified by a human, and the author takes full responsibility for the final product.

SUPPLEMENTARY MATERIAL

Supplementary Video S1 is available online on the website of www.jpmer.com.

Video S1: Demonstration of the described technique with English audio narration

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