evoendo
Evolving Endoscopy

EvoEndo® Single-Use Endoscopy System
Case Study

Innovative Endoscopic Management of Proximal Esophageal Stricture in a Patient with Epidermolysis Bullosa

PRESENTED BY

Michael A. Manfredi, MD
Pediatric Gastroenterologist
Philadelphia, PA

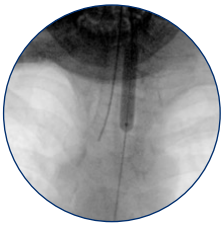
INTRODUCTION

Epidermolysis Bullosa (EB) is a rare genetic condition characterized by extreme fragility of the skin and mucosal membranes, including the esophagus. Esophageal strictures are a common complication in patients with EB, often requiring endoscopic dilation for symptom relief and nutritional support. However, standard endoscopic approaches can be particularly challenging in these patients due to tissue fragility, limited access, and procedural risks. This paper presents a complex case of proximal esophageal stricture management in a young adult patient with EB, utilizing a combination of EvoEndo's ultra-thin endoscope and modified fluoroscopic techniques.

PATIENT HISTORY

In 2025, a 23-year-old with a known history of Recessive Dystrophic Epidermolysis Bullosa presented with chronic dysphagia due to a proximal esophageal stricture. The patient had undergone a failed esophageal dilation attempt in 2014 as an endoscope could not be passed transorally. This was due in part to the fact that the jaw was fused due to scarring related to his EB around the lips and oral cavity. Due to this a retrograde dilation technique through a gastrostomy tube (G-tube) was employed. It required stoma dilation and the use of Savary dilators. The dilation of the G-tube stoma itself posed a significant risk and was problematic given the patient's EB-related tissue fragility. Since 2014, the patient had not undergone any subsequent endoscopic evaluation or dilation and suffered from long-standing dysphagia.

METHODS



Fluoroscopy image of EvoEndo scope and guidewire with balloon dilation of stricture

Initially, an attempt was made to pass an Olympus GIF-XP190N endoscope with a maximum outer diameter of 5.8 mm transorally. It quickly became apparent that this was not feasible due to oral access limitations. At that point, the use of an EvoEndo ultra-slim endoscope with a maximum outer diameter of 3.5 mm with a transnasal approach was considered.

The EvoEndo Model LE 85 cm scope was inserted successfully transnasally and advanced into the esophagus to visualize the stricture. A guidewire was then passed under fluoroscopic guidance, followed by passage of a balloon over the wire. Balloon dilation was performed carefully under fluoroscopic visualization to open and relieve the stricture.

Following the dilation, the EvoEndo scope was reinserted transnasally to confirm that the esophageal stricture had been successfully dilated and there was no evidence of perforation.

FINDINGS

The stricture was successfully visualized and treated using a combination of direct endoscopic visualization and wire placement with the EvoEndo scope and subsequent fluoroscopically guided balloon dilation. The patient tolerated the procedure well, and post-procedural assessment revealed improved swallowing function and reduced dysphagia symptoms for the first time in over 10 years.

SUMMARY

This case highlights the unique challenges of endoscopic management in patients with Epidermolysis Bullosa and the value of EvoEndo's ultra-slim 3.5 mm outer diameter, single-use endoscope in providing a minimally traumatic diagnostic and therapeutic options. The EvoEndo Model LE gastroscope allowed for an atraumatic approach in a patient who could not tolerate passage of a wider diameter ultra-thin gastroscope.

CONCLUSION

In this case, the integration of EvoEndo's ultra-slim gastroscope underscores the flexibility and patient-centered design of the platform. While a transnasal approach was ultimately used, the endoscope also enabled direct visualization and traversing of a very narrow esophageal stricture, thus enhancing patient safety, The versatility is particularly beneficial for patients with severe mucosal fragility and complex anatomy.

The EvoEndo Model LE Gastroscope is intended for the visualization of the upper digestive tract in adults and pediatric patients, specifically for the observation, diagnosis, and endoscopic treatment of the esophagus, stomach, and duodenal bulb. The gastroscope is a sterile single-use device and can be inserted orally or transnasally. The EvoEndo Controller is intended for use with an EvoEndo Endoscope for endoscopic diagnosis, treatment, and video observation.