

Transnasal Esophageal Stricture Dilatation using Savary–Gilliard Dilator System—A Novel Approach

Kartik Goyal¹ Narender Bhargava¹ Sunil Dadhich¹ Naveen Kumar¹

¹Department of Gastroenterology, Mathura Das Mathur Hospital, Govt. of Rajasthan, Dr. Sampurnanand Medical College and Associated Group of Hospitals, Jodhpur, Rajasthan, India

Address for correspondence Narender Bhargava, MD, DM, Department of Gastroenterology, Mathura Das Mathur Hospital, Govt. of Rajasthan, Dr. Sampurnanand Medical College and Associated Group of Hospitals, Jodhpur 342001 Rajasthan, India (e-mail: narenbhargava@gmail.com).

J Digest Endosc 2019;10:186–187

Abstract

Keywords

- ▶ postcorrosive stricture
- ▶ Savary–Gilliard dilator
- ▶ transnasal route
- ▶ ultrathin scope

Transnasal esophagoscopy is office-based procedure, used by otolaryngologists and gastroenterologists for evaluation of dysphagia, odynophagia, esophageal stricture dilatations, and other numerous indications. Through the scope (TTS) balloon dilatation using ultrathin gastroscope is routine practice in patients with esophageal stricture (ES). Here, we are highlighting a case of post corrosive esophageal stricture with inadequate mouth opening dilated using savary gilliard (SG) dilator system transnasally.

Introduction

Transnasal esophagogastroduodenoscopy (EGD) is being into clinical practice from last 30 years¹ for various indications such as odynophagia, globus pharyngeus, foreign-body evaluation, esophageal strictures (ES), and varices assessment in unsedated patients.² In patients with inadequate mouth opening, EGD with ultrathin scope via the nasal route is an established practice for diagnostic, as well as therapeutic, purposes. Through the scope (TTS) balloon dilatation of ES transnasally has already been done by clinicians worldwide.³ Here, we are discussing a novel approach of ES dilatation in patients with reduced mouth opening using Savary–Gilliard (SG) dilator system.

Case Report

A 62-year-old male patient presented with progressive dysphagia to both solids and liquids for the past 1 month associated with vomiting (within minutes of taking solid/liquid meals) with a history of inadvertent corrosive (acid) ingestion 70 days back. The patient was oral tobacco chewer for the past 40 years.

With this clinical history, we had kept the possibility of postcorrosive ES, and the patient was planned for upper gastrointestinal endoscopy (UGIE).

On the day of investigation, we observed that it was not feasible to pass the standard gastroscope through oral route as the patient had minimal mouth opening.

Subsequently, the patient was subjected to UGIE using ultrathin gastroscope (working channel 2.0 mm) through

the nasal route under topical anesthesia. It showed stricture narrowing at 23 cm from the incisors, and scope was not negotiable beyond. Under fluoroscopic guidance, spring-tipped steel guide wire was placed in the antropyloric region. Then, the stricture was dilated up to 11 mm using SG dilator system (over the wire) transnasally (▶Figs. 1A and B) without any postprocedure complications.

Postdilatation UGIE study revealed long-length (6 cm) straight stricture with deformed stomach, while pylorus was patent.

Discussion

Transnasal EGD for ES dilatation and other indications has been a quite common practice in patients who cannot tolerate/fit for oral EGD.⁴ In our case, the patient had oral submucosal fibrosis (chronic tobacco chewer) which led to minimal mouth opening, so we adopted nasal route using ultrathin gastroscope. Stricture dilatation with the help of TTS balloon via transnasal route has already been described in the literature.³ Although epistaxis was reported in 5% of patients who underwent transnasal endoscopy,⁵ we have not seen any amount of bleeding in our patient. However, it should be kept in mind while doing transnasal EGD in patients with a history of previous nasal trauma, nasal surgery, or nasal anatomical problems.

Due to limited anatomical space for passage of accessories (SG dilator) through nasal approach, we were able to

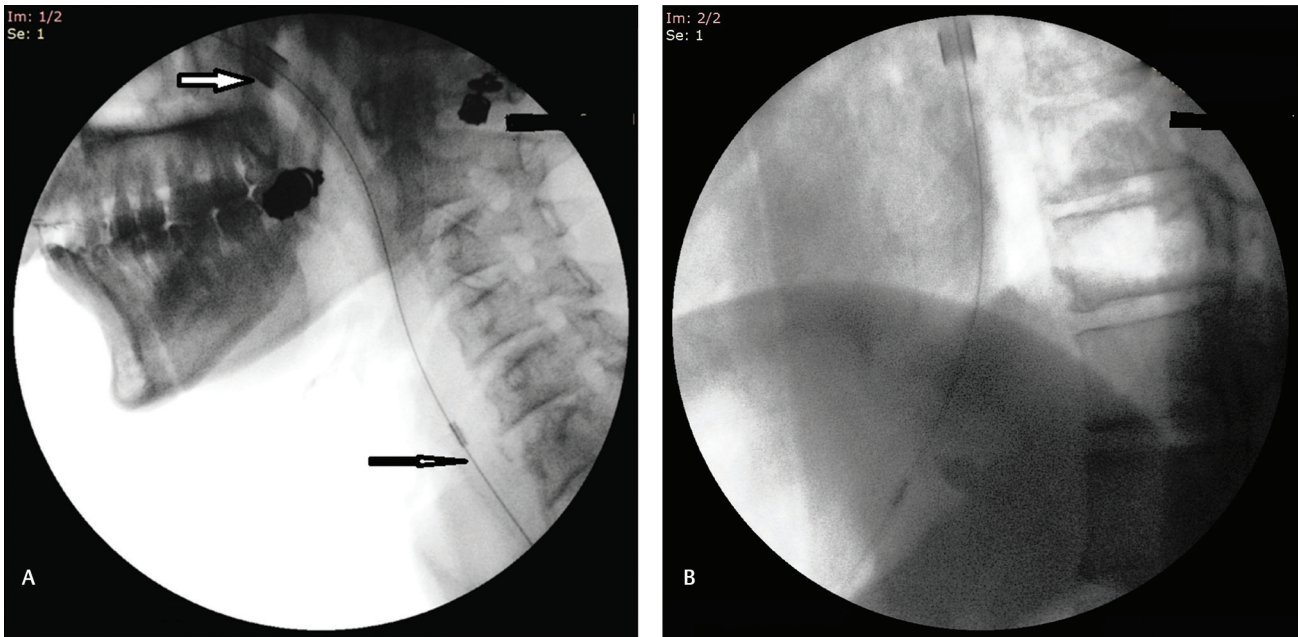


Fig. 1 (A) Fluoroscopic image showing radiopaque dilated segment of Savary–Gilliard dilator (9 mm) in (A) nasopharynx area (white arrow) and steel guide wire in cervical (upper) esophagus (black arrow). (B) Above the diaphragm and steel guide wire transverses across the diaphragm.

dilate the stricturous narrowing only up to 11 mm. Hence, the desired dilatation could not be achieved by this route using SG dilator.

In our knowledge, for the first time, this approach is being used for ES dilatation in patients with insufficient mouth opening (not feasible for oral conventional gastroscopy), and the procedure was completed with ease and without any complications.

This approach is of great help in resource-constrained developing countries where availability of TTS balloon is restricted due to huge financial burden.

Since our experience is based on the single case, larger studies are required to comment on the safety profile of this procedure.

Funding

None.

Conflict of Interest

None declared.

References

- 1 Fregonese D, Di Falco G. Through-the-nose gastroscopy. *Am J Gastroenterol* 1991;86(3):381
- 2 Amin MR, Postma GN, Setzen M, Koufman JA. Transnasal esophagoscopy: a position statement from the American Bronchoesophagological Association (ABEA). *Otolaryngol Head Neck Surg* 2008;138(4):411–414
- 3 Rees CJ, Fordham T, Belafsky PC. Transnasal balloon dilation of the esophagus. *Arch Otolaryngol Head Neck Surg* 2009;135(8):781–783
- 4 Gopal DV, Zaman A, Katon RM. A role for transnasal esophago-gastroduodenoscopy in patients intolerant to the oral route: report of two cases. *Gastrointest Endosc* 1999;49(3, Pt 1): 379–381
- 5 Tatsumi Y, Harada A, Matsumoto T, Tani T, Nishida H. Current status and evaluation of transnasal esophagogastroduodenoscopy. *Dig Endosc* 2009;21(3):141–146