Meeting in the Middle: Rendezvous Procedure for Severe Esophageal Stricture

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INTRODUCTION

- Severe esophageal strictures may occur after **cancer treatment, caustic injury or other benign conditions**.
- Associated with **dysphagia, aspiration and malnutrition**.
- The **rendezvous procedure** offers an endoscopic solution to re-establish esophageal luminal patency.

Objective:

- To evaluate the feasibility and therapeutic outcomes of the rendezvous procedure in patients with severe esophageal strictures

METHODS

- **Design:** Retrospective review (2000-2024)
- **Patients:** 38 with complete esophageal obstruction
- **Excluded:** 3 failed procedures

Procedure technique:

1. Retrograde access obtained (most commonly via **gastrostomy tube site**)
2. Simultaneous **antegrade and retrograde endoscopy** performed
3. Endoscope advanced until visualized from opposite side
4. **Common pathway created → antegrade dilation performed**

RESULTS

Baseline demographic and clinical characteristics stratified by stricture etiology are summarized in **Table 1**. Most strictures in our cohort occurred following **radiation therapies for head and neck cancer**, with other causes including **caustic injury, photodynamic therapy, peptic stricture and idiopathic esophageal stricture**.

Table 1 Patient Characteristics by Stricture Etiology

Characteristics	Radiation (n=29)	Caustic Injuries (n=3)	Photodynamic Therapy (n=1)	Peptic Stricture (n=1)
Age (Median)	66	31	78	73
Gender (Male/Female)	20/9	2/1	0/1	1/0
Race				
White	26	3	1	1
Black	2	0	0	0
Asian	1	0	0	0
Smoking (Never/Light/Heavy)	5/8/16	0/1/2	0/1/0	0/0/1
Alcohol (Never/Light/Heavy)	27/2/0	2/1/0	1/0/0	1/0/0
Prior Esophageal Surgery	0	1	0	0
Benign Esophageal Disease				
GERD	8	0	1	1
Hiatal Hernia	0	0	1	0
None	21	3	0	0
PPI	7	0	1	0
Primary Malignancy				
Tonsillar/Tongue/Oral Cavity	11	0	0	0
Pharyngeal/Laryngeal	19	0	0	0
Thyroid	1	0	0	0
Lung/Tracheal	2	0	0	0
Esophageal	0	0	1	0
HNSCC unspecified	1	0	0	0
Chemotherapy	29	0	0	0
Prior Antegrade Dilation	7	3	1	1
Maximum Size of Dilation (Fr)	46.5	30	33	42

All quantitative data are presented as median (range).

Most strictures were located in the **proximal esophagus (<25 cm from incisors)** and were typically penetrable using either the **floppy or stiff end of a 0.038mm Jagwire**. In selected cases, **biopsy forceps** were used to break down the dense fibrotic tissue. **(Table 2)**

One patient developed **pneumomediastinum with small bilateral pneumothoraces**. Esophagram demonstrated a **contained perforation** managed conservatively with **NPO and antibiotics**.

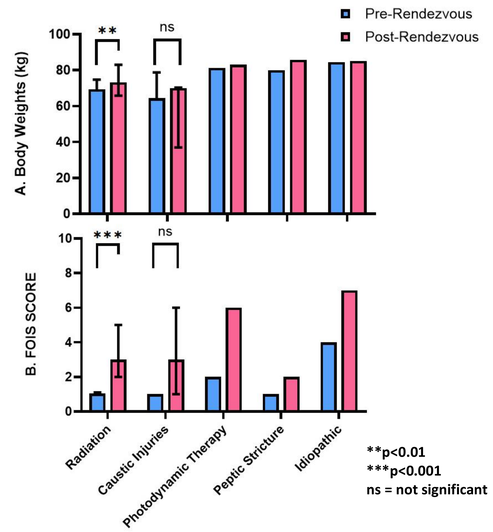
Patients with radiation-related strictures demonstrated significant increases in **body weight** and **Functional Oral Intake Scale (FOIS) scores** at their **most recent follow-up** compared with baseline prior to the index Rendezvous procedure **(Figure 1)**. A similar trend was observed in other etiologies, although the difference was not statistically significant.

Table 2 Stricture Characteristics and Procedural Details by Etiology

Surgical Details	Radiation (n=29)	Caustic Injuries (n=3)	Photodynamic Therapy (n=1)	Peptic Stricture (n=1)	Idiopathic (n=1)
Stricture Location (cm)	15 (13-20)	18 (15-18)	31	N/A	N/A
Stricture Length[1]	17.5 (1-90)	20 (20-20)	N/A	15	N/A
Type of Endoscopy					
Direct Laryngoscopy	2	0	0	0	0
Flexible Esophascopy	28	3	1	1	1
Rigid Esophagoscopy	2	0	0	0	0
Distal Entry Site					
Pre-existing Gastrostomy	29	2	1	1	0
Others[2]	0	1	0	0	1
Puncture Directions					
Antegrade/Retrograde/Bidirectional	12/13/2	3/0/0	0/1/0	1/0/0	0/1/0
Puncture Method					
Floppy Guidewire	22	3	0	0	0
Stiff Guidewire	3	0	0	0	0
Biopsy Forceps	4	0	0	1	0
Others[3]	3	0	1	0	0
Dilation Method					
Balloon[4]/Bougie	2/25	0/3	0/1	0/1	0/1
Maximum Dilation (Fr)	24 (15-60)	30 (24-39)	24	21	36
Concomitant Stent Placement	4	1	1	0	0
Complication					
Perforation	0	0	0	1	0
Repeat Rendezvous (times)	0 (0-4)	2 (1-3)	0	0	13
Follow-up Dilations (times)	7 (0-40)	12 (5-49)	4	4	16
Maximum Dilation at Follow-up (Fr)	51 (30-60)	42 (33-60)	33	39	45

All quantitative data are presented as median (range).
[1] Stricture length defined as the distance between the ends of two endoscopes on intraoperative fluoroscopy.
[2] Included cervical esophagoscopy and concomitantly created gastrostomy.
[3] Included endoscopy, needle and cold knife.
[4] Bougie dilators were used following balloon dilation.

Figure 1 Changes in Body Weight and FOIS Before and After Rendezvous Procedure



CONCLUSION

- The rendezvous procedure is a feasible technique for managing severe esophageal strictures.
- The procedure demonstrated a low risk of complications.
- The procedure restores esophageal patency and is associated with improved oral intake and nutritional status, particularly in radiation-related strictures.

REFERENCES

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