Minimally Invasive and Novel Therapeutics (M.I.N.T.)
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# Pearls and Pitfalls in the Recovery Area

Laura Shannon, RN, Brittany DiPalma, RN


# Objectives

- Review types of endoscopic interventional procedures
- What are expected vs unexpected outcomes for POEM
- Signs of complications and the nurse's role in managing these in recovery
- Review cases with both positive and negative outcomes and how they were managed
- Recovery pearls and pitfalls

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# Types of Endoscopic Procedures

- Esophagogastroduodenoscopy (EGD)
- Endoscopic Ultrasound (Upper & Lower EUS)
- Endoscopic Retrograde Cholangiopancreatography (ERCP)
- Colonoscopy
- Peroral Endoscopic Myotomy (POEM, GPOEM, ZPOEM)
- Small Bowel Enteroscopy/Single Balloon Enteroscopy or ERCP

# The Role of the Nurse in Recovery

What to monitor post procedure

- Vital signs
- Pain level
- Mental status
- PO tolerance ( if applicable)

What is the expectation of the recovery room nurse

- Constant communication with MD
  - Notify for any changes in patient's status

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# Post-POEM patient in Recovery

## Expected symptoms

- Sore throat
- Mild chest discomfort
- Minimal to no pain
- Mild dysphagia

## When to notify the MD

- Fevers
- Hematemesis or melena
- Chest pain
- Crepitus
- Hypoxia
- Tachycardia

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# Pop Quiz

28 year old with type 2 achalasia undergoes POEM.

You get report that the procedure went as planned.  Minor bleeding was encountered and treated

No recognized perforations

Post Procedure, the patient has chest discomfort and throat pain

T: 98.9 P: 88 BP: 138/88  O2 sat: 99% 2L
1st year GI fellow comes to see the patient and orders KUB for the chest pain

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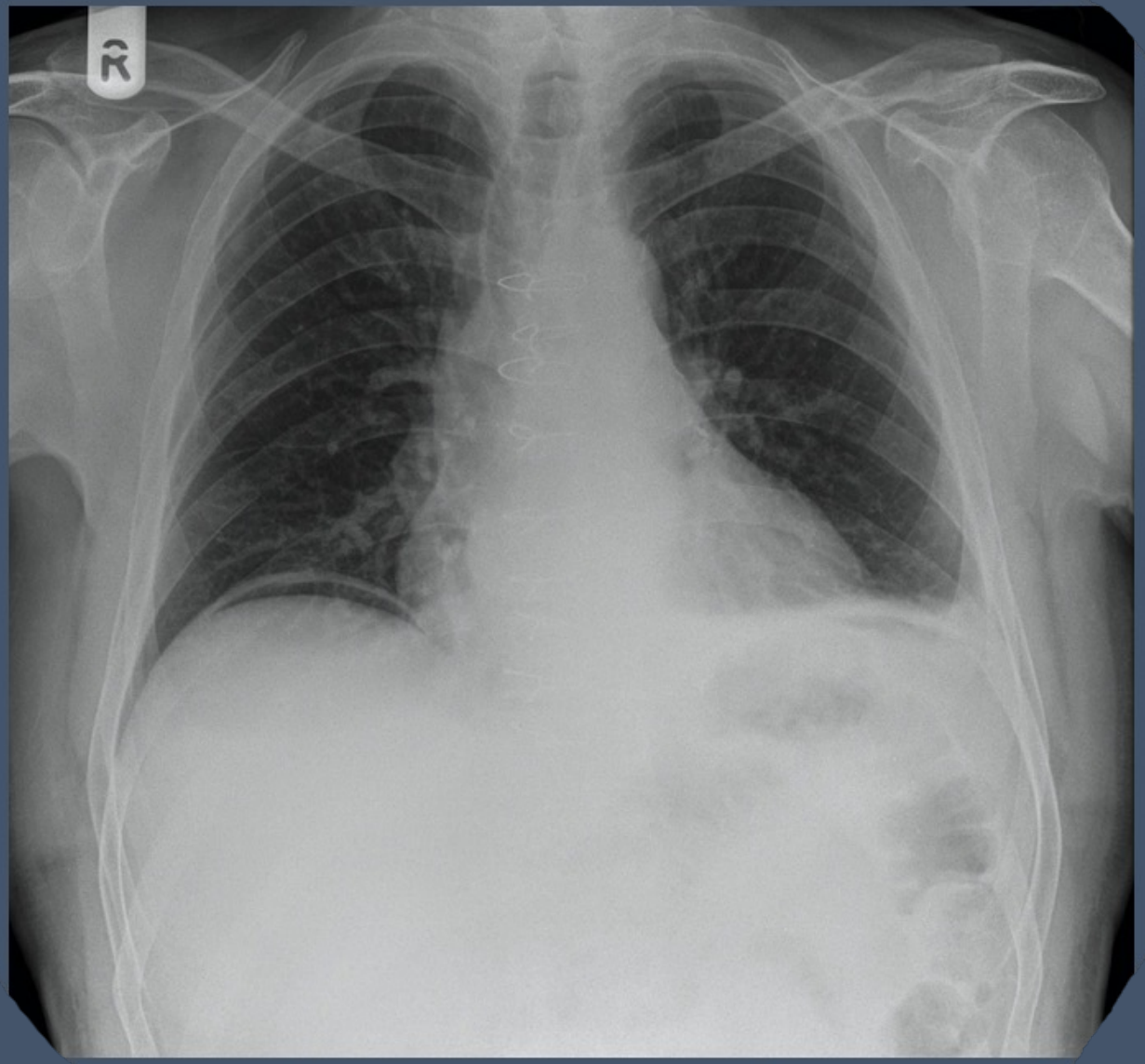


# You see the result as the rad tech finishes the upright KUB. You should

A. Page thoracic surgery stat
B. Obtain a stat CT chest with oral contrast
C. Obtain a stat CT chest but no oral contrast
D. Notify the physician, but reassure the patient as long as vitals are normal.

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# Diet recommendations post POEM

- Variable depending on institution, physician comfort and patient factors
- If it was a complicated case with mucosotomy and bleeding, consider keeping NPO until speaking with physician
- Straight forward POEM may be able to be d/c same day and can have liquids
- Have a protocol and communicate!!! Every case is different so be sure to ask before giving PO

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# Common Complications in Post-Procedure Recovery

- GI Bleeds
- Perforation
- Infection

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# GI Bleeds
## Symptoms

Upper GI bleeding symptoms:

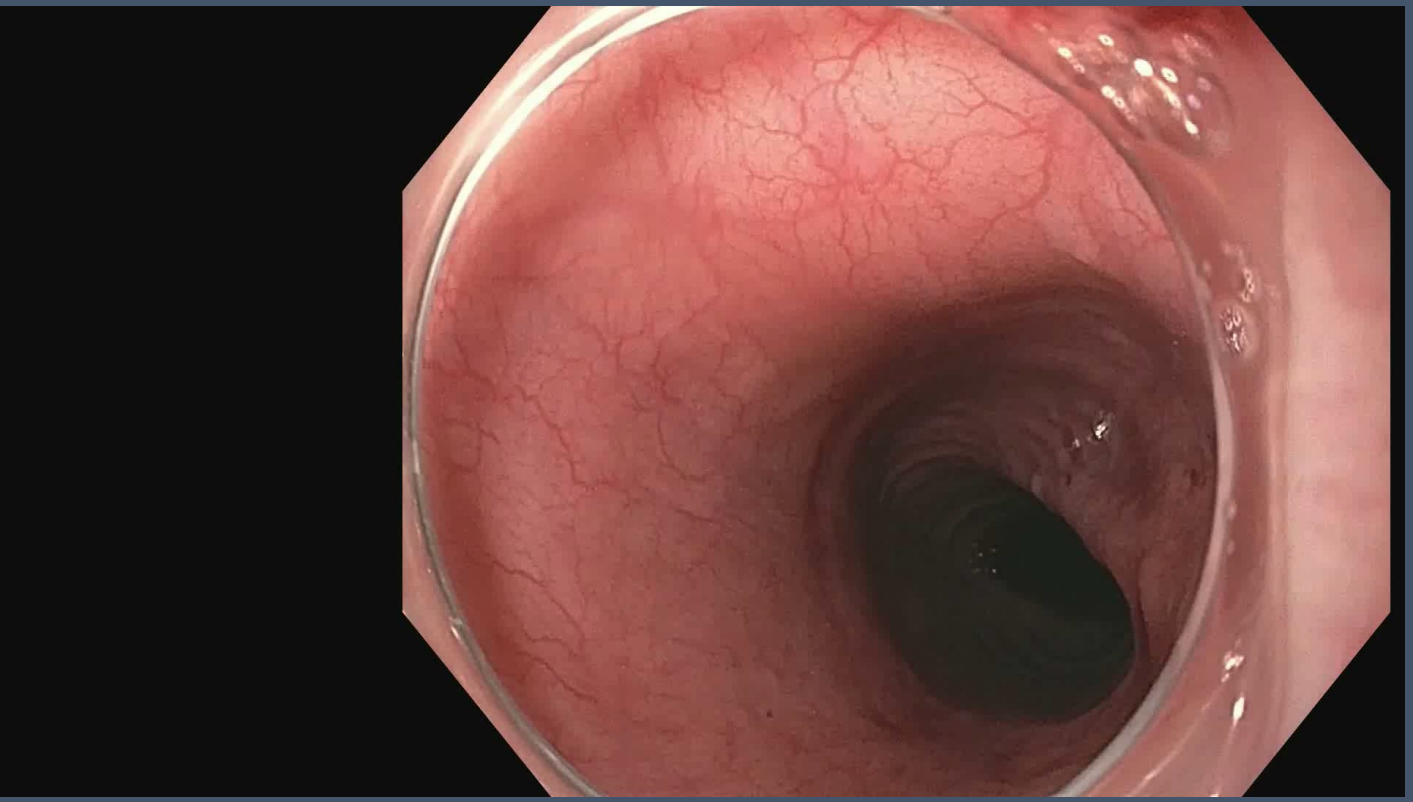
- Hematemesis
- Hypotension
- Tachycardia
- Melena…Late

Lower GI bleeding symptoms:

- Tachycardia
- Hypotension
- Weakness
- Pallor
- Bright red rectal bleeding

# Pop Quiz

46 year old with long standing GERD is found to have BE with intramucosal carcinoma. He undergoes EUS and is found to have a superficial carcinoma and is planned for EMR



Which of the following is the MOST reassuring that the bleeding was adequately controlled in recovery

A. O2 sat 99% on room air
B. Stat Hct was checked immediately after procedure and was 43
C. HR of 75, unchanged from preop
D. Lack of melena on rectal exam

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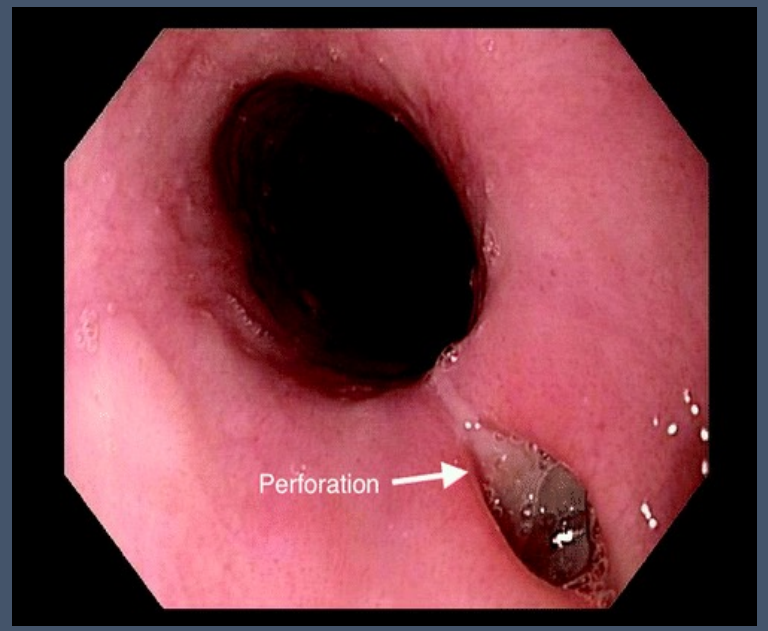
# Perforation
## Precipitating Factors/ Causes

- Scope trauma
- Complex Endoscopic Muscosal Resection
- Dilation
- POEM
  - Mucosotomy
  - Previous achalasia treatments

# Perforation Symptoms

- Dysphagia
- Crepitus
- Pain
- Fever
- Shortness of breath
- Cyanosis
- Diaphoresis
- Hypotension
- Abdominal Distention
- Tachycardia




https://www.liebertpub.com/doi/10.1089/lap.2017.0559

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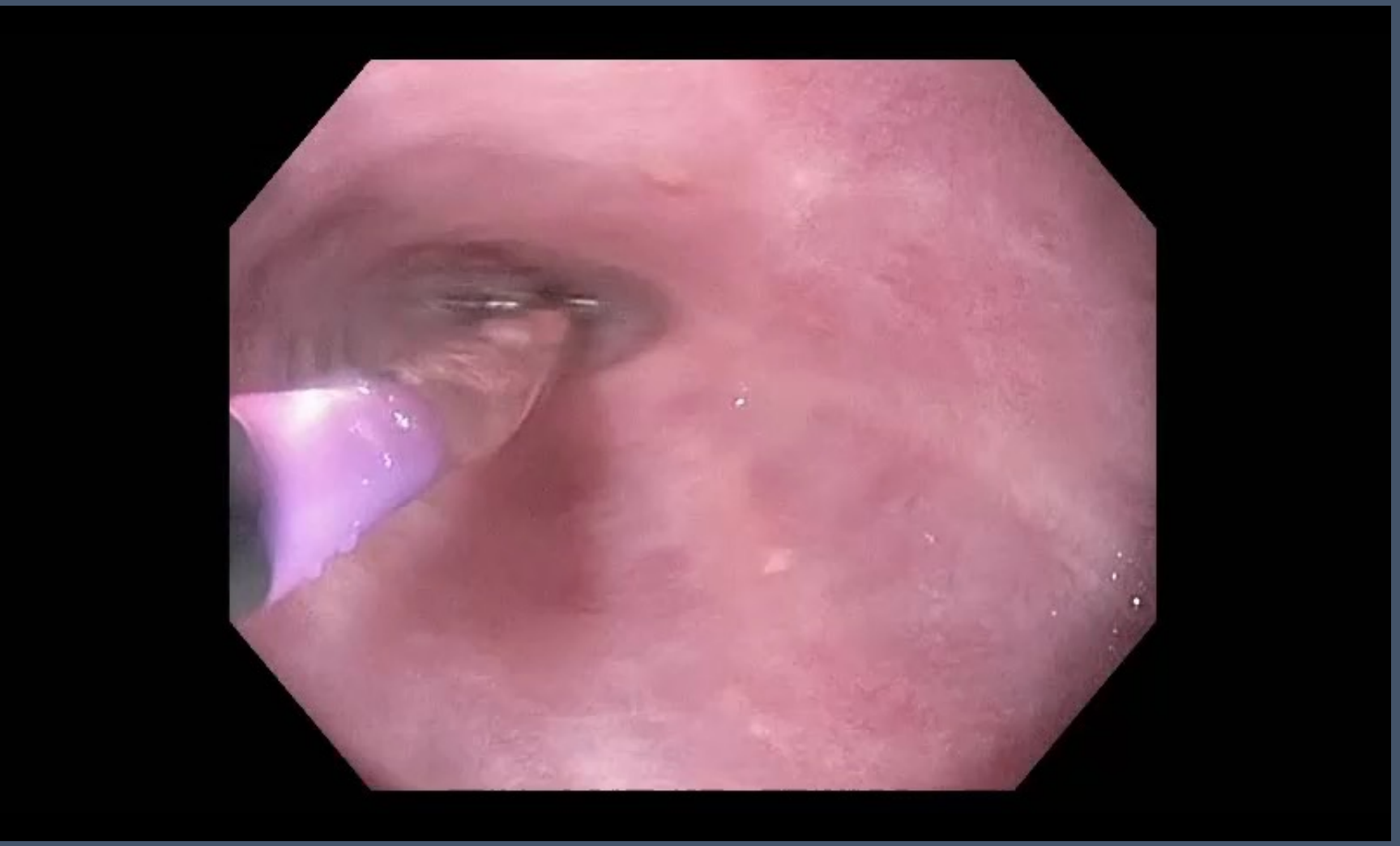

48 year old pt comes in for serial dilation for benign esophageal stenosis.

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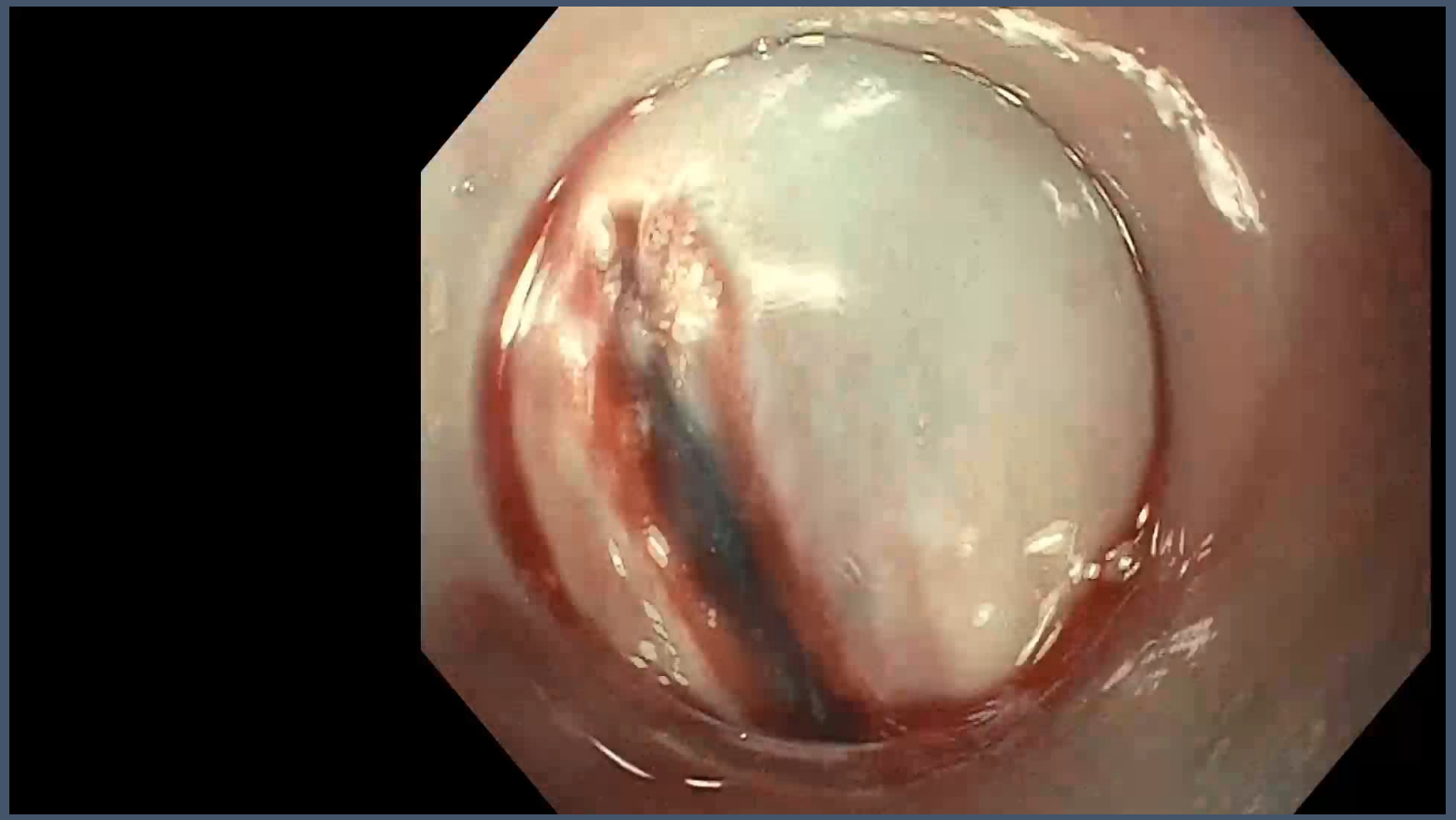
# Pop Quiz #3

Intraprocedure, the perforation is treated with a covered metal stent and is sutured in place. Post procedure pt complains of 7/10 substernal chest pain. As this patient's nurse in recovery, what would you anticipate next?
VS: T: 99.2, P-120, BP- 142/90, O2- 92% RA

Select all that apply:

A) Notify MD immediately
B) Keep pt NPO and anticipate stat imaging
C) Go to Tatte and order a latte
D) Prepare patient for potential hospital admission
E) The perforation is treated, so just give 2mg IV dilaudid and sit tight

# Case example



62 year old female with history of achalasia, s/p multiple rounds of botox treatments and pneumatic dilations with progressive dysphagia. Pt presents for POEM procedure.

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# Early vs Late signs of complication

## Early Signs

- Change in vital signs
- Hematemesis
- Light headedness
- Severe chest pain

## Late Signs

- Melena
- Drop in Hgb/Hct
- Hypoxia

# Expected Disposition

Admission vs Discharge home

- Hospital admission for further observation

Clear liquids vs Strict NPO

- Likely strict NPO due to mucusotomy while pt undergoes further observation

Follow up imaging vs none

- KUB , Chest CT, Barium swallow

# Management of Symptoms

- Conservative Management (What Type of Medications Are Used?)
  - Antiemetics
  - Pain Medications (Tylenol, magic mouthwash, narcotics, etc)
  - IV hydration (Lactated ringers)
  - Antibiotics
- Use of pillows, warm packs
- Adjusting the Patient's Position on the Bed
- Imaging (Portable X-ray, CT scan)
- Re-scope to evaluate
- Hospital Admission
- Diet


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# Pearls and Pitfalls

- Pearls
  - Early detection in recovery
  - Adequate SBAR from procedural nurse to recovery nurse
  - Early communication with proceduralist
  - Understand complications specific to the procedure
- Pitfalls
  - Inability to closely monitor patient in recovery
  - Lack of knowledge surrounding specific procedures

# References


- *A Core curriculum 5th edition,* ed. by Nancy O'Connor
- https://www.massgeneral.org/digestive/treatments-and-services/poem
- Kumar Krishnan, MD


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