ASGE Guideline: Role of Endoscopy in Management of Acute Colonic Pseudo-obstruction and Colonic Volvulus

By Fiyinfoluwa O. Abraham, MD

Background

Colonic volvulus –> most common cause of non-malignant mechanical colonic obstruction

Acute colonic pseudo-obstruction (ACPO) = Ogilvie's –> functional bowel obstruction; no cause of obstruction noted on imaging but may present very similarly to mechanical obstruction

Risk factors for ACPO and colonic volvulus: Elderly, debilitated, multiple medical comorbidities, hospitalized

CT scan of abdomen/pelvis -> best way to differentiate between ACPO and colonic volvulus

- ACPO: Dilated colon with possible transition zone + no obvious mechanical obstruction
- Colonic volvulus: Dilated colon + mesenteric whirl sign. (CT is near 100% sensitive & >90% specific for sigmoid volvulus)

Colonic Volvulus

Results from torsion of mesenteric axis – most commonly in cecum or sigmoid colon

Risk Factors

- Long redundant colon w/ narrow mesenteric attachment, prior abdominal surgery, constipation, colonic dysmotility
- ↑Risk for Cecal Volvulus –> Age>70, DM, neuropsych disorders, African Americans

Management

- **First line tx for sigmoid volvulus –> flex sig with or without placement of decompression tube**
- **Consult surgery during initial admission for sigmoid volvulus**
- **First line tx for Cecal volvulus –> Surgery**; surgery also tx of choice for sigmoid volvulus with peritonitis, perforation, recurrent/unsuccessful non-operative management

Endoscopy

- Identify 2 points of abruptly twisted/converging colonic mucosa
- Lumen dilated between proximal and distal points of torsion = closed loop obstruction
- **Endoscopic Treatment**
  1. **Advance scope to point of obstruction**
  2. **Gently pass scope through twisted segment**
  3. **Aggressive decompression of dilated colon segment**
  4. **Above steps result in spontaneous detorsion**

REMEMBER TO ASSESS COLONIC MUCOSA FOR VIABILITY

Acute Colonic Pseudo-Obstruction

Adverse Events –> Ischemia and perforation

- **Risk of perforation increases with cecal diameter >10-12cm & distension lasting > 6 days**
- Must exclude mechanical obstruction
  - KUB usually able in making dx but cannot reliably distinguish functional vs mechanical obstruction
  - Contrast enema is an option although this has been replaced by CT scan

Uncomplicated ACPO = cecal diameter <12cm, lack of ischemia, peritonitis, significant abdominal pain

Management

- **First line tx –> Conservative management up to 72hrs** – identify and discontinue predisposing factors esp. narcotic use, correct fluid/electrolytes, ambulation, treatment of infection, keep NPO, decompression of UGI tract with NG tube

- **2nd line tx –> Pharmacologic tx = Neostigmine IV 2-5mg x 1 dose (okay to give 2nd dose if first non-responsive after 24hrs) – subQ or continuous 0.4mg/hour if not responsive to bolus dosing**
  - Contraindications: Intestinal/urinary obstruction + hypersensitivity reaction; bradycardia, asthma, recent MI, PUD, acidosis
  - Must have continuous cardiac monitoring + atropine at bedside in case of bradycardia
  - Adverse reactions: bronchospasms, bradycardia, nausea/vomiting, abdominal pain, diarrhea, sweating
  - Oral Pyridostigmine shown to treat ACPO refractory to neostigmine and colonic decompression

Naveed M, Jamil LH, Fujii-Lau LL, et al. American Society for Gastrointestinal Endoscopy guideline on the role of endoscopy in the management of acute colonic pseudo-obstruction and colonic volvulus. Gastrointest Endosc 2020;91:228-235.

ACPO: Endoscopic Decompression

Indications

- **Persistent and marked colonic dilation + failed conservative measures (up to 72hrs)**
- **Refractory to medical management**
- **Neostigmine is contraindicated**

More likely to fail medical therapy if younger patient, abdominal distension is chief complaint, greater cecal diameter

Evidence supporting colonoscopy as first line therapy is limited

Procedure

- Perform by an experienced endoscopist
- **Use water infusion**
- **Minimal to No insufflation - use CO2 over Air**
- Sedation -> avoid narcotic-medications
- ***Patient should NOT be prepped*** 💩

Goals for colonoscopy

1. **Reach at least distal transverse colon**
2. **Once there –> extensive suctioning of air**
3. **Assess colonic mucosa**
4. **Post-procedure low-dose polyethylene glycol daily –> can reduce recurrence rates**

Predictors of endoscopic failure

- Female gender, emergent admission, COPD, metastatic cancer

ACPO: Surgical Management & Alternative Procedures

Indications for surgery

- Failed conservative, pharmacologic and endoscopic management
- Ischemia, peritonitis, perforation, cecal diameter > 12cm, or clinical deterioration

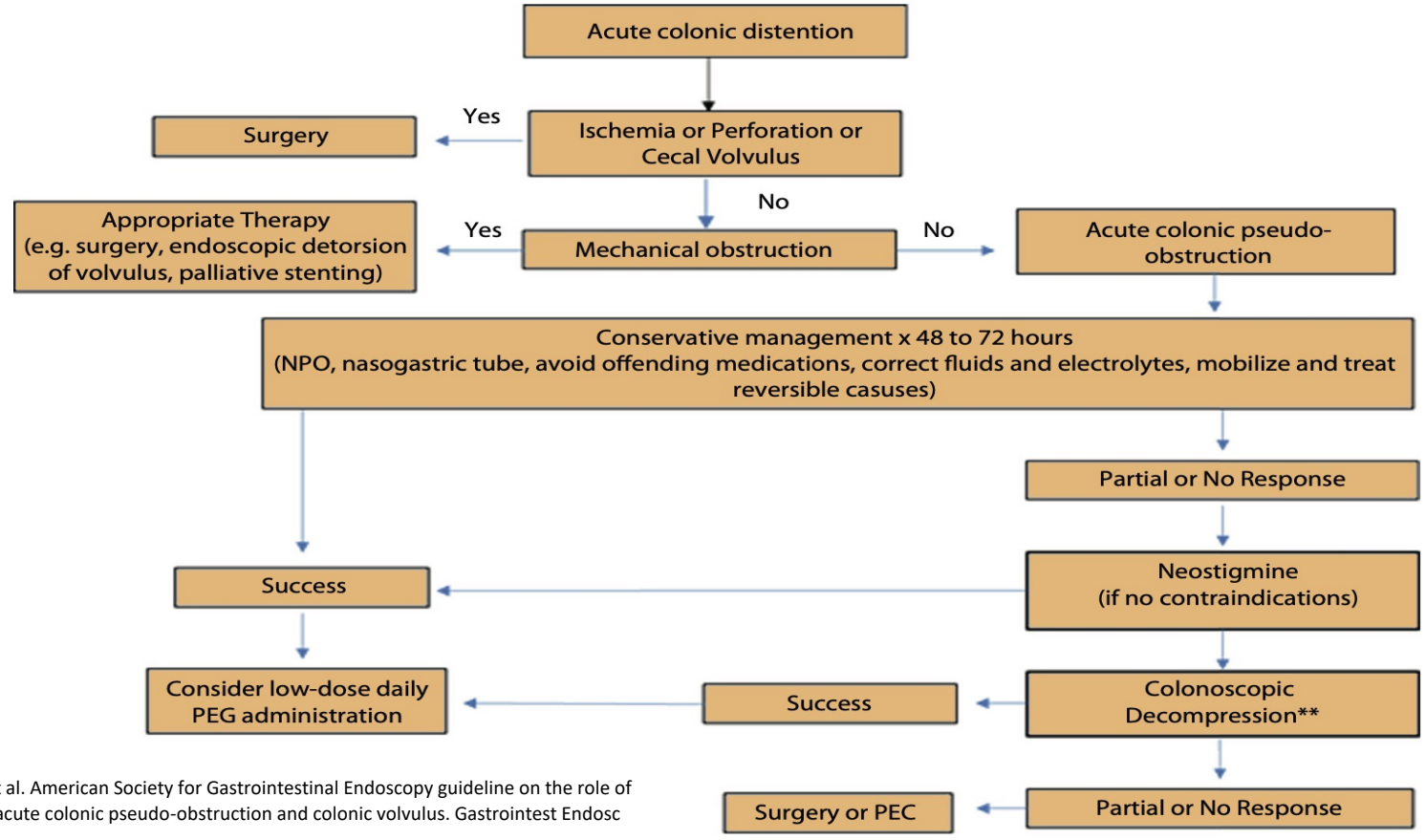
Surgical options –> cecostomy tube, percutaneous cecostomy, subtotal colectomy

- *Increased morbidity/mortality with surgically placed cecostomy tubes*
- *Surgical mortality in those with ischemic/perforated bowel as high as 44%*

Percutaneous endoscopic colostomy of cecum (PEC-cecum) –> alternative for decompression in ACPO and cecal volvulus

- Associated with high mortality and complications (infection, bleeding, hematoma, perforation, buried bumper)

Management Algorithm for Acute Colonic Distention



Naveed M, Jamil LH, Fujii-Lau LL, et al. American Society for Gastrointestinal Endoscopy guideline on the role of endoscopy in the management of acute colonic pseudo-obstruction and colonic volvulus. Gastrointest Endosc 2020;91:228-235.