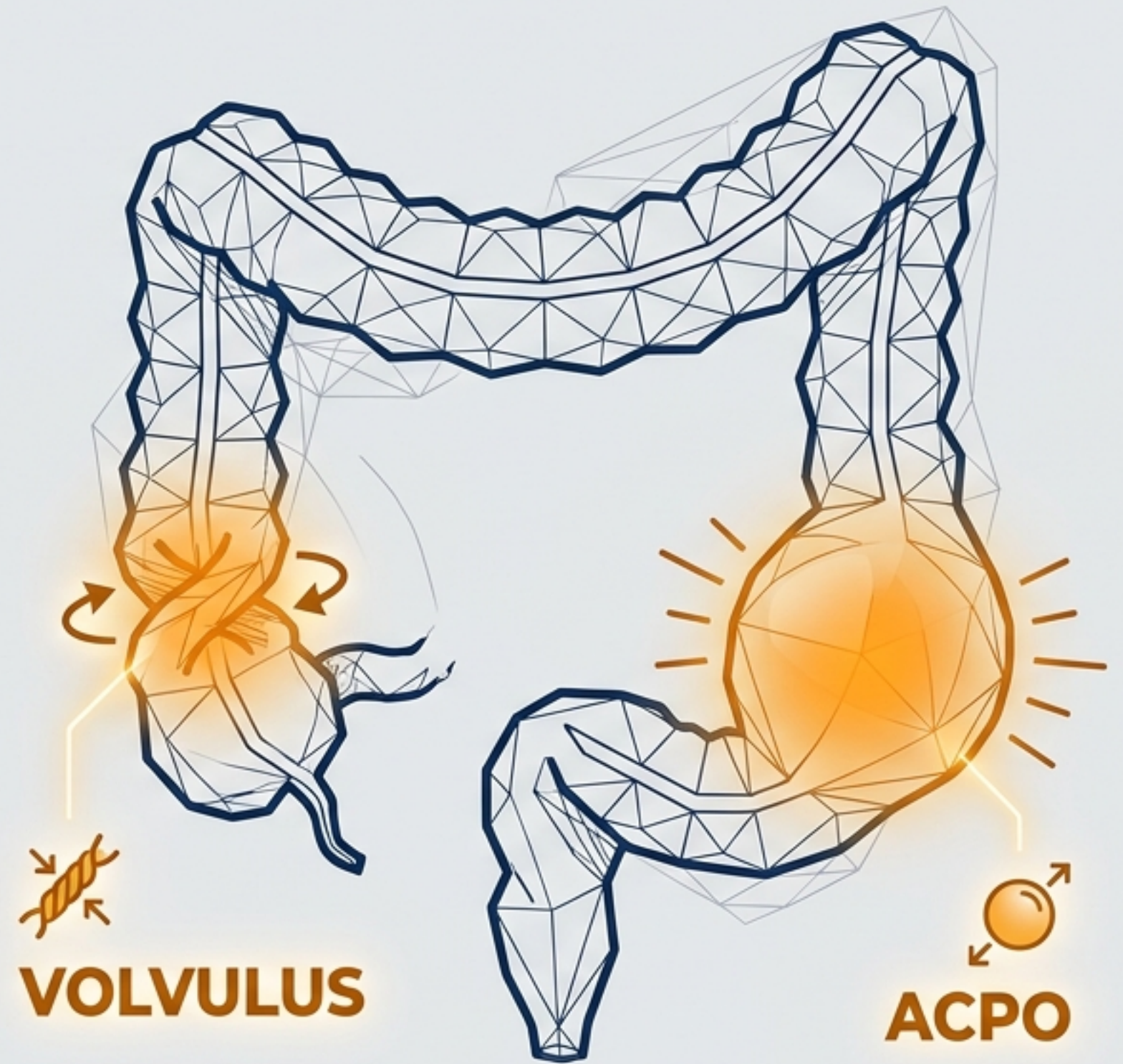


CLINICAL BLUEPRINT: ENDOSCOPIC MANAGEMENT OF COLONIC VOLVULUS AND ACPO

Distilled clinical pathways, diagnostic thresholds, and intervention algorithms based on ASGE Guidelines.



Large-Bowel Obstruction (LBO)

Accounts for ~25% of all intestinal obstructions.

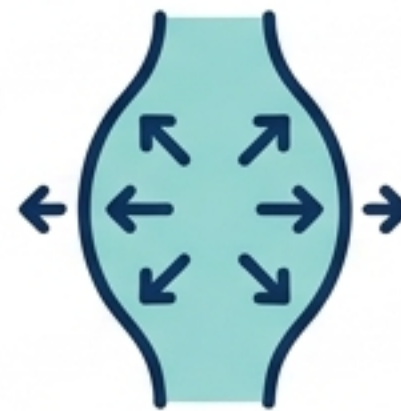
Mechanical Obstruction



Colonic Volvulus

Physical torsion of redundant colon along its mesenteric axis.

Functional Obstruction



Acute Colonic Pseudo-Obstruction (ACPO) / Ogilvie's Syndrome

Colonic atony and massive dilation without physical blockage.

Delay in distinguishing these etiologies is associated with substantial morbidity and mortality. Cross-sectional CT imaging is required immediately.

Colonic Volvulus

ACPO

Patient Profile

Elderly men (>70), African Americans, neuropsychiatric disorders, prior abdominal surgery. (Note: Cecal volvulus often presents in younger females).

Hospitalized patients, critical illness, recent surgical procedures, metabolic imbalance, severe trauma.

Pathophysiology

Torsion of a redundant segment of colon along a narrow mesenteric attachment.

Altered autonomic nervous system regulation causing colonic atony.

Anatomical Focus

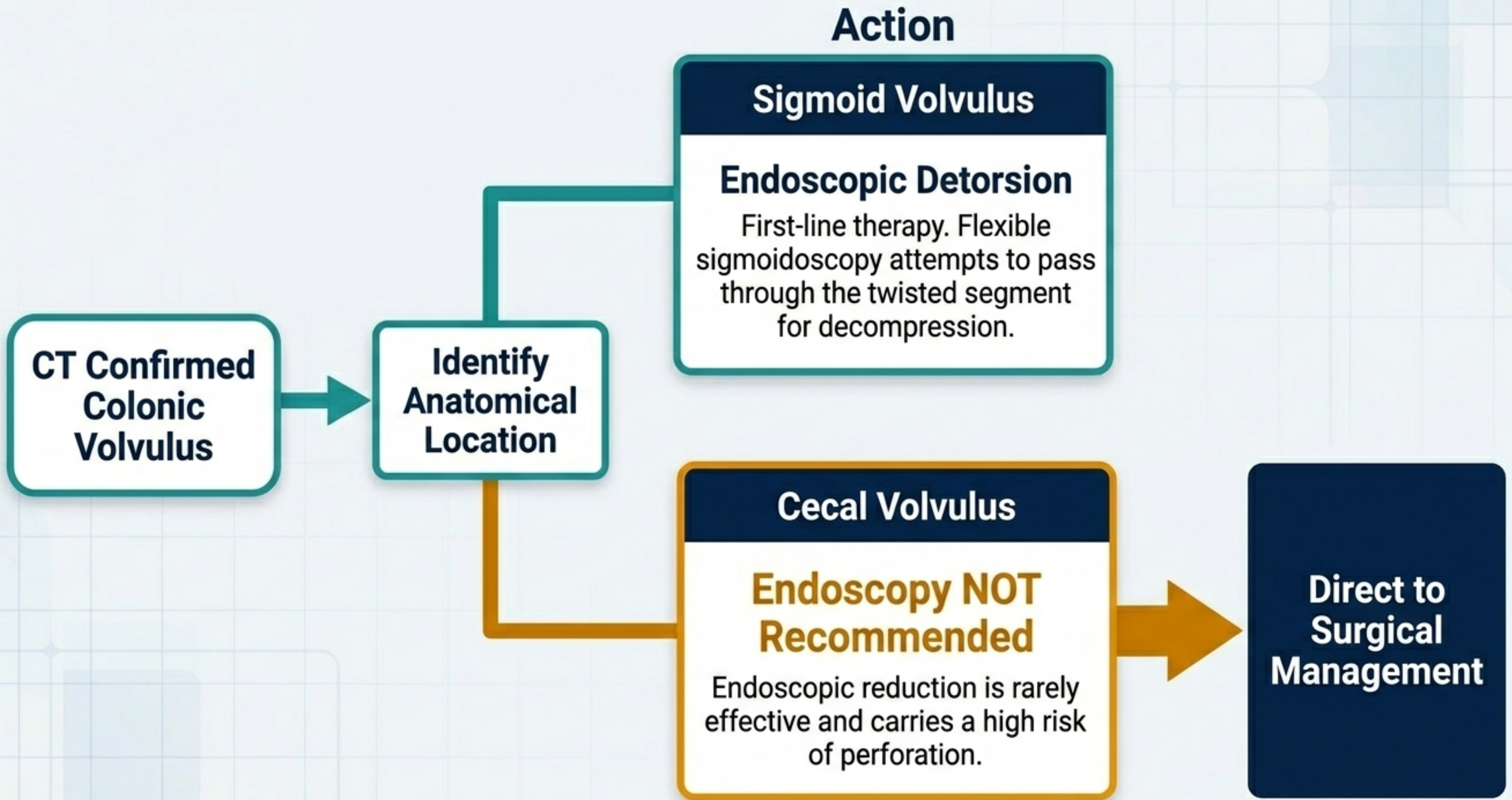
Sigmoid Colon (most common) or Cecum.

Generalized massive large intestine dilation (Right-sided colon highly susceptible to ischemia).

Definitive CT Findings

Dilated colon with the diagnostic mesenteric whirl sign.

Colonic dilatation with a possible transition zone, but NO mechanical cause of obstruction.



⚠ Only if absent: Peritonitis, Perforation, Ischemia.

Step 1

Endoscopic Navigation

Insert flexible endoscope to the point of obstruction (characterized by two points of abruptly twisted/converging mucosa).

Gently pass through the twisted segment.

Step 2

Decompression & Detorsion

Perform aggressive decompression of the dilated, closed-loop segment.

This often results in spontaneous detorsion. Allows for assessment of colon viability.

Step 3

Stabilization

Place a decompression tube proximal to the point of torsion.

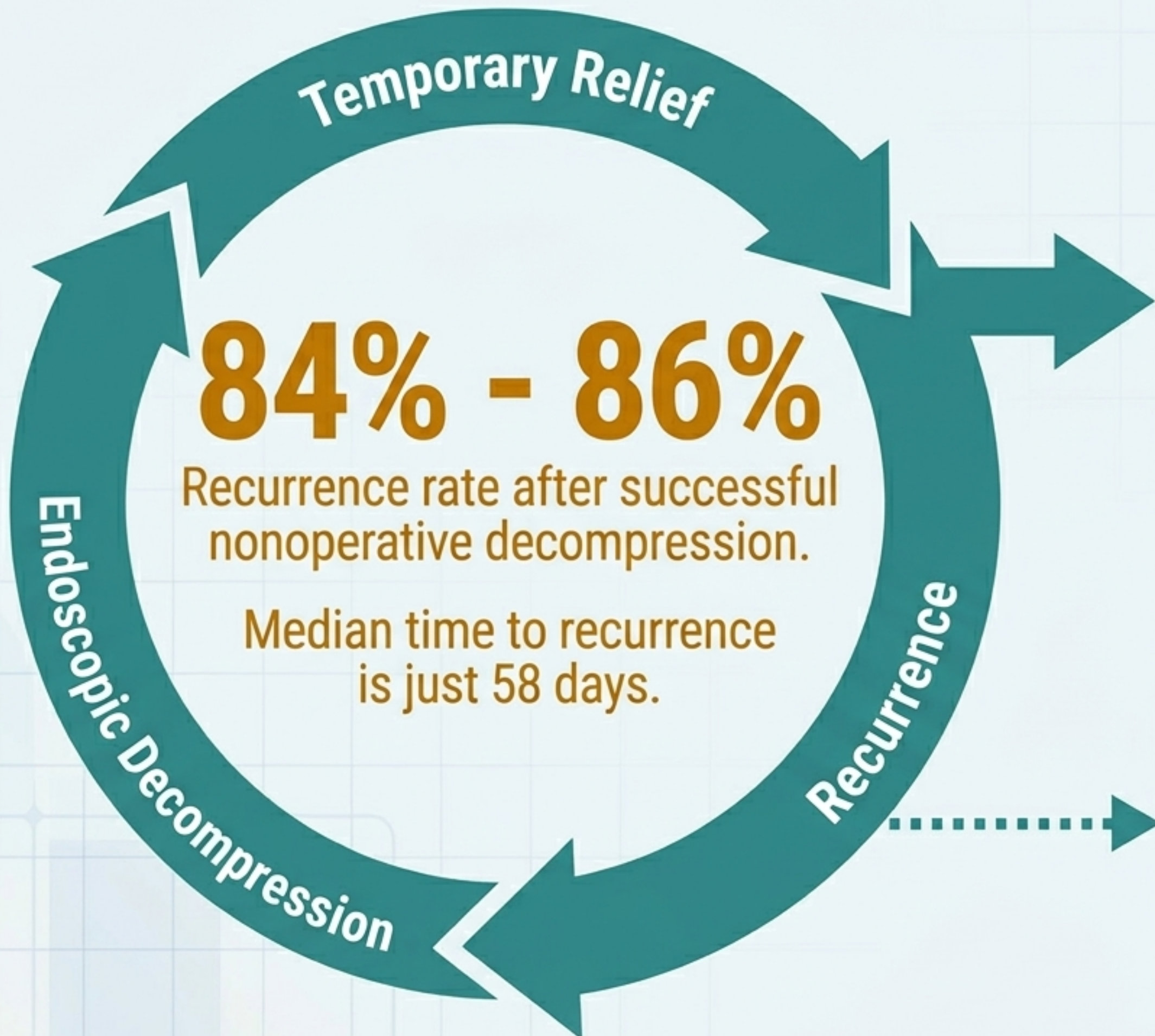
(Maintains reduction and allows continuous colonic decompression).

55% - 94%

Success rate of endoscopic detorsion

Predictive success factors:

- Absence of abdominal tenderness, laxative use, history of open abdominal surgery.



Temporary Relief

84% - 86%

Recurrence rate after successful nonoperative decompression.

Median time to recurrence is just 58 days.

Endoscopic Decompression

Recurrence

Elective Sigmoid Colectomy

Recommended during index admission or shortly after due to high mortality in recurrent episodes.

Percutaneous Endoscopic Colostomy (PEC) / Sigmoidopexy

Fixes the colon to the abdominal wall.

 21% morbidity rate, risk of serious adverse events.

CRITICAL THRESHOLDS & DANGER ZONES

Cecal Diameter Threshold



Duration of Distention



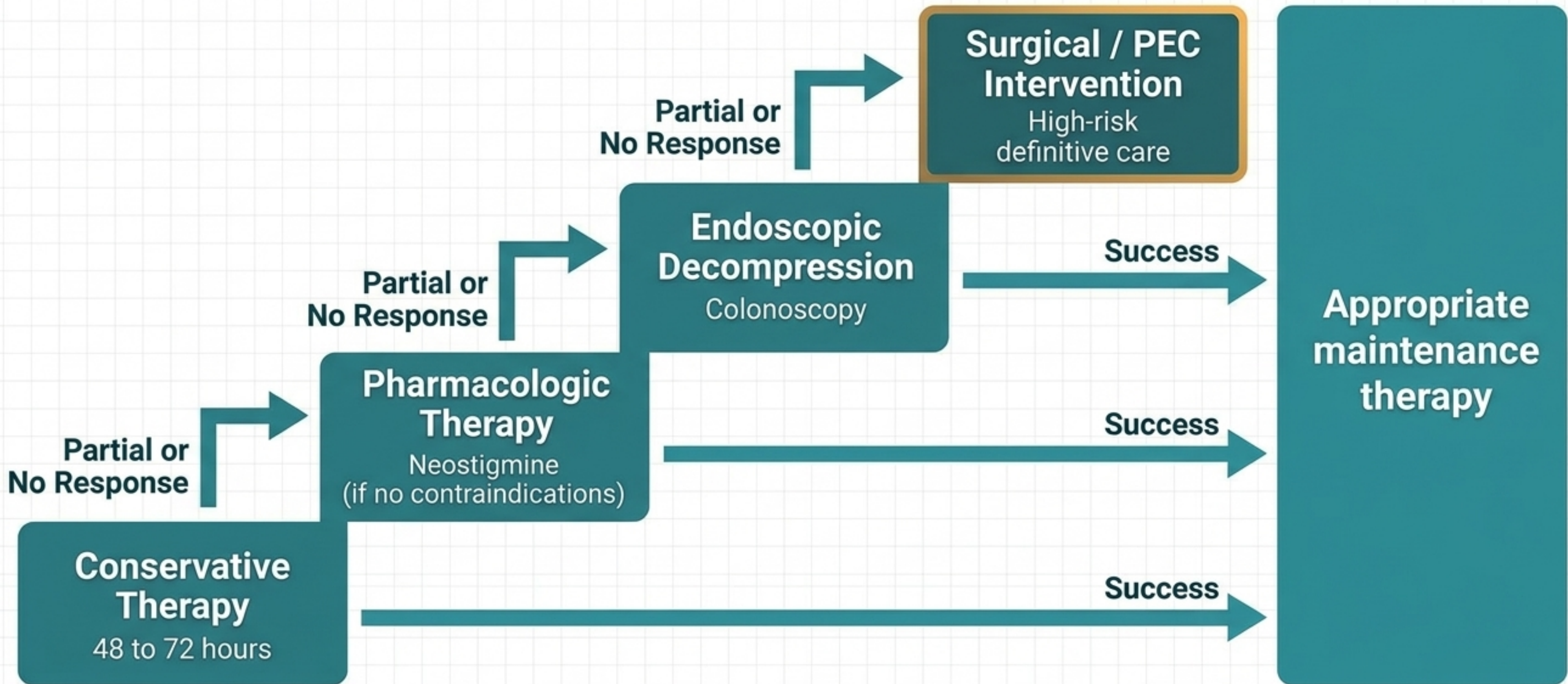
Consequence Box



Hitting these thresholds drastically increases the risk of **Ischemia** (10% of patients) and **Spontaneous Perforation**.



Spontaneous perforation occurs in 3–25% of cases and carries up to a 50% mortality rate.



Rule out mechanical obstruction, ischemia, or perforation

Stage 1: Conservative Management (First 48-72 Hours)

Target: Uncomplicated ACPO (cecal diameter <12cm, no peritonitis, no significant pain)

- ✓ Maintain patient NPO (nothing by mouth).
- ✓ Place nasogastric tube to decompress the proximal gut.
- ✓ Identify and discontinue offending medications (especially narcotics).
- ✓ Correct fluid and electrolyte imbalances.
- ✓ Encourage patient ambulation/mobilization.
- ✓ Treat underlying infections.

77% - 96%
Overall Success Rate



Requires serial assessment
of cecal diameter.

Stage 2: Pharmacologic Therapy (Neostigmine)

Mechanism:

Short-acting anticholinesterase parasympathomimetic agent.

Primary Protocol:

1 Dose = 2 to 5 mg administered intravenously over 3-5 minutes.

Efficacy:

85% to 94% success in resolving ACP0.



CRITICAL REQUIREMENT: Must have continuous cardiac and respiratory monitoring. Immediate access to Atropine is required to treat potential severe bradycardia.

Contraindications: Absolute: Mechanical obstruction, known hypersensitivity. **Relative:** asthma, renal insufficiency, peptic ulcer disease, recent MI.

Stage 2: Pharmacologic Alternatives & Failures

The Second Bolus

If initial dose fails or response is partial, a second bolus yields a clinical response in 40% to 100% of cases.

- **Risk factors for failure:** Male, younger, post-op, electrolyte imbalance.

Continuous Infusion

For patients refractory to bolus dosing.

Protocol: 0.4 to 0.8 mg/hour over 24 hours.

Benefit: May be associated with fewer side effects and greater bowel diameter reduction at 24 hours.

Maintenance & Salvage

Part 1: Daily PEG: Administration of polyethylene glycol via NG tube decreases recurrence.

Part 2: Salvage agents: Pyridostigmine (oral), Methylnaltrexone, Prucalopride (Requires further research before routine recommendation).

Stage 3: Colonoscopic Decompression

Patient Selection

For persistent marked dilatation failing conservative/medical measures, or if neostigmine is contraindicated.

Procedural Technique

Unprepped colon. Use water infusion. Minimal to NO carbon dioxide insufflation. Attempt to reach distal transverse colon, followed by extensive air suctioning.

Sedation Rules

Prefer benzodiazepines.
Strictly avoid narcotics (potentiates colonic atony).

Outcomes & Risks

- Initial success: up to 95%
- Recurrence rate: ~40% (repeat colonoscopy common)
- Perforation risk: ~2%
- Mortality risk: ~1%

Stage 4: Surgical & Percutaneous Intervention

⚠️ Trigger Conditions

- Peritonitis
- Ischemia
- Perforation
- Clinical deterioration

or

- Cecal diameter >12cm.

⚠️ Percutaneous Endoscopic Colostomy (PEC-cecum)

Invasive, but up to 100% success.
High risk of adverse events (infection, bleeding, buried bumper).

⚠️ Surgical Therapy

Cecostomy tube or Subtotal colectomy.

⚠️ Up to 44% Surgical Mortality ⚠️

All efforts should be made to manage ACPO nonoperatively.
Mortality is exceptionally high once bowel becomes ischemic or perforated.

ASGE Clinical Checklist: Colonic Volvulus



SUGGEST endoscopy as initial treatment for uncomplicated sigmoid volvulus, followed by decompression tube placement to maintain reduction.



RECOMMEND immediate surgical management for any volvulus presenting with overt perforation or peritonitis.



SUGGEST surgical consultation during index admission for sigmoid volvulus due to high recurrence risk.



RECOMMEND AGAINST endoscopic intervention for Cecal Volvulus due to high perforation risk; pursue surgical management initially.

ASGE Clinical Checklist: ACPO (Ogilvie's Syndrome)



Step 1: RECOMMEND conservative therapy as initial management for uncomplicated ACPO (<12cm, no ischemia/peritonitis).



Step 2: RECOMMEND Neostigmine (2mg over 3-5 mins with cardiac monitoring) if conservative therapy fails (up to 72 hrs) and no contraindications exist.



Step 3: SUGGEST a second dose of neostigmine, or alternative routes (subcutaneous/continuous infusion) if the first bolus fails.



Step 4: SUGGEST colonic decompression with tube placement if conservative/pharmacologic therapy fails and no contraindications to endoscopy exist.



Step 5: RECOMMEND immediate surgical management for overt perforation or peritonitis.