

Post-Colonoscopy Complications

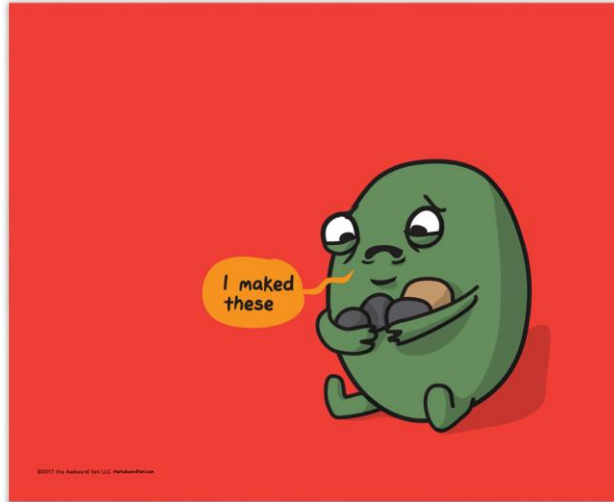
Grand Rounds – Wednesday June 3, 2026

Huntsville District Memorial Hospital

Presenter: Dr. Nastasia Wasilewski, General Surgery

Who am I?

- General Surgeon in a Practice Share with Dr. Jennifer Macmillan
- Have been working in the field for 10 years
- Focus on bariatric and minimally invasive (laparoscopic) procedures, minimally and enjoy the challenges of a



family...

cers, minimally
and enjoy the

Objectives

- Review common and rare colonoscopy complications
- Understand prep- and sedation-related complications
- Identify when urgent surgical consultation is required

Why Colonoscopy Matters

- Gold standard for colorectal cancer screening and preventative therapy
- Millions performed annually
- Low complication rate but high morbidity when missed

Overall Complication Rates

- Screening colonoscopy: ~2–3 per 1000
- Symptomatic colonoscopy: ~5 per 1000
- Higher risk with therapeutic procedures

Most Common Adverse Events

- Related to Colonoscopy Prep
- Cardiopulmonary and sedation-related events (#1)
- Bleeding
- Perforation
- Post-polypectomy syndrome

Bowel Preparation Complications

- Dehydration
- Electrolyte disturbances
- Acute kidney injury
- Medication interactions

Patients at Higher Prep Risk

- Elderly patients
- Chronic kidney disease
- Heart failure
- Diuretic or ACE inhibitor use

How We Mitigate Prep Risks

- PegLyte prep (instead of PicoSalax)
- Adequate hydration
- Adjust meds in CKD, diabetes, or heart failure
- Split-dose prep
- Counseling and clear instructions



- **Pico-Salax (Low-Volume):** Generally better tolerated with higher patient satisfaction, often preferred for its better taste (similar to citrus) and smaller, 2-dose volume.
- **PegLyte (High-Volume):** Often considered safer for patients with kidney, liver, or heart disease because it is less likely to cause fluid and electrolyte imbalances.

Sedation-Related Complications

- Hypoxia and respiratory depression
- Hypotension and arrhythmias
- Aspiration
- Oversedation/somnolence

Who Is at Higher Sedation Risk?

- Age > 65
- ASA class III or IV
- Obstructive sleep apnea
- Cardiac or pulmonary disease

How We Mitigate Sedation Risks

- Ask a kind anesthesiologist to provide sedation
- Appropriate patient selection
- Continuous monitoring
- Careful titration of sedatives



Colonic Perforation

- 0.4–0.8 per 1000 colonoscopies
- Higher risk with polypectomy
- Most commonly sigmoid colon

Mechanisms of Perforation

- Mechanical trauma from scope
- Barotrauma from insufflation
- Thermal injury during polypectomy

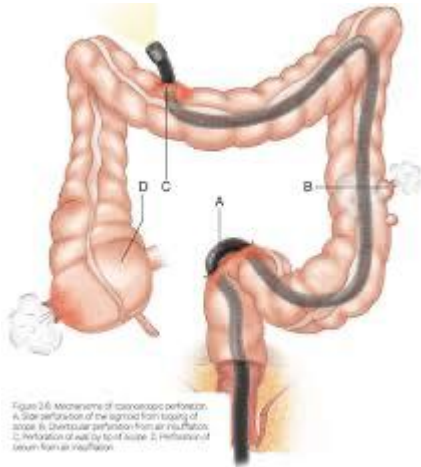
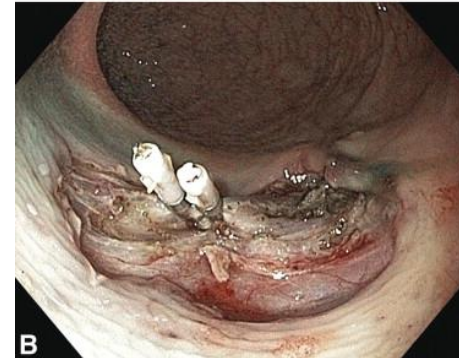
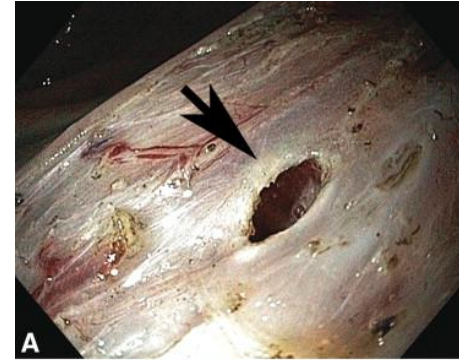
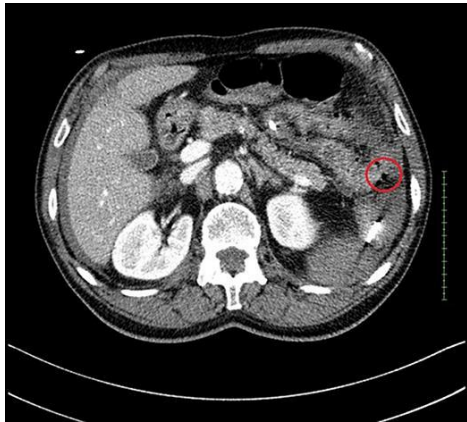


Figure 2.6: Mechanisms of colonoscopic perforation. A: Sigmoid perforation of the sigmoid from looping of scope. B: Cecocolic perforation from air insufflation. C: Perforation of wall by tip of scope. D: Perforation of cecum from air insufflation.



CT Findings: Colonic Perforation

- Free intraperitoneal air
- Extraluminal contrast
- Localized fluid collections



Demonstrates free intra-abdominal air, extraluminal gas — CT is the most sensitive test.

^E Clinical Presentation of Perforation

- **Severe or worsening abdominal pain**
- Peritoneal signs
- Fever, tachycardia, hypotension (LATE)



Microperforation

- Still a perforation...
- May be managed non-operatively
 - Small hole, small(er) problem
 - Less contamination because of prep
- These are small so will **NOT see free air on XRay...**
get the CT
 - If left untreated typically progress to sepsis/free perforation

Management of Perforation

- **Early recognition is critical**
- Small perforations may be clipped endoscopically, or treated non-operatively
- Surgery required for instability or contamination

Post-Polypectomy Syndrome

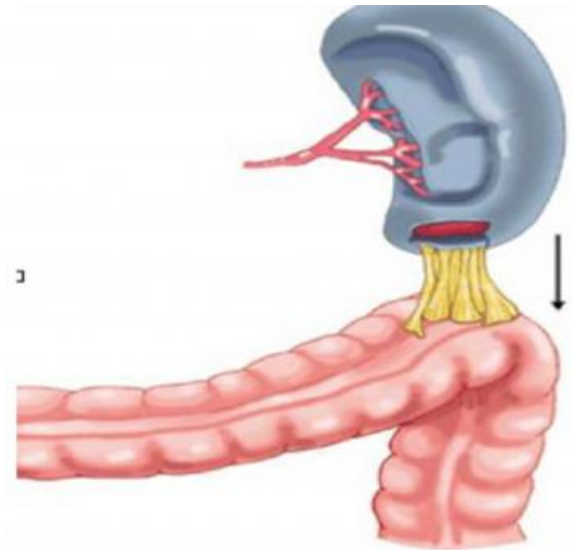
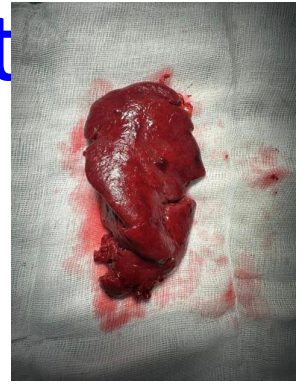
- Transmural thermal injury *without perforation*
- Typically symptoms appear 12 hours-5 days after procedure
- Fever and localized peritonitis
- CANNOT DIFFERENTIATE THIS FROM PERFORATION ON PHYSICAL EXAM
 - CT shows bowel wall thickening, no free air

Bleeding After Colonoscopy (BRBPR)

- Immediate or delayed
- More common after polypectomy
- Most resolve with supportive care
 - Sometimes will repeat scope to place a clip
 - Blood is an excellent laxative...

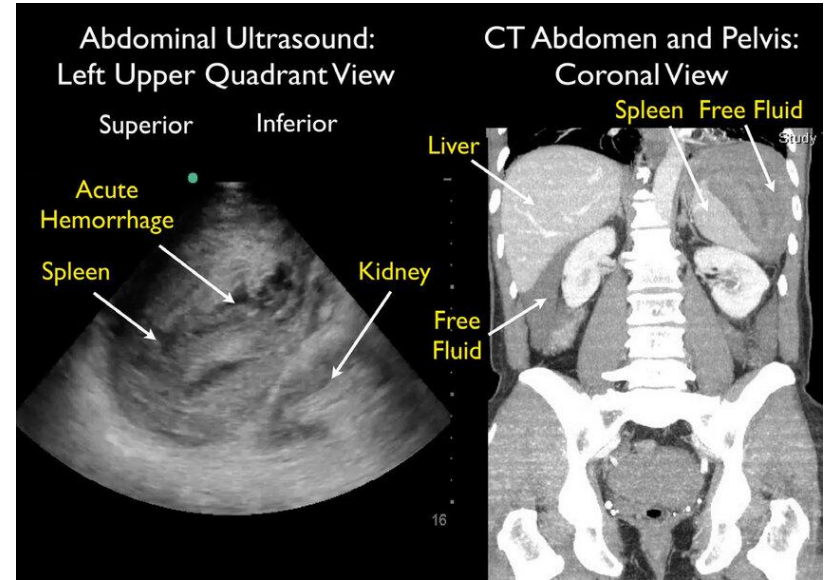
Bleeding After Colonoscopy (Int abdominal)

- Most likely due to **Splenic Injury**
- Rare but potentially fatal
- Due to traction at splenic flexure
- LUQ pain, anemia, hypotension



CT Findings: Splenic Injury

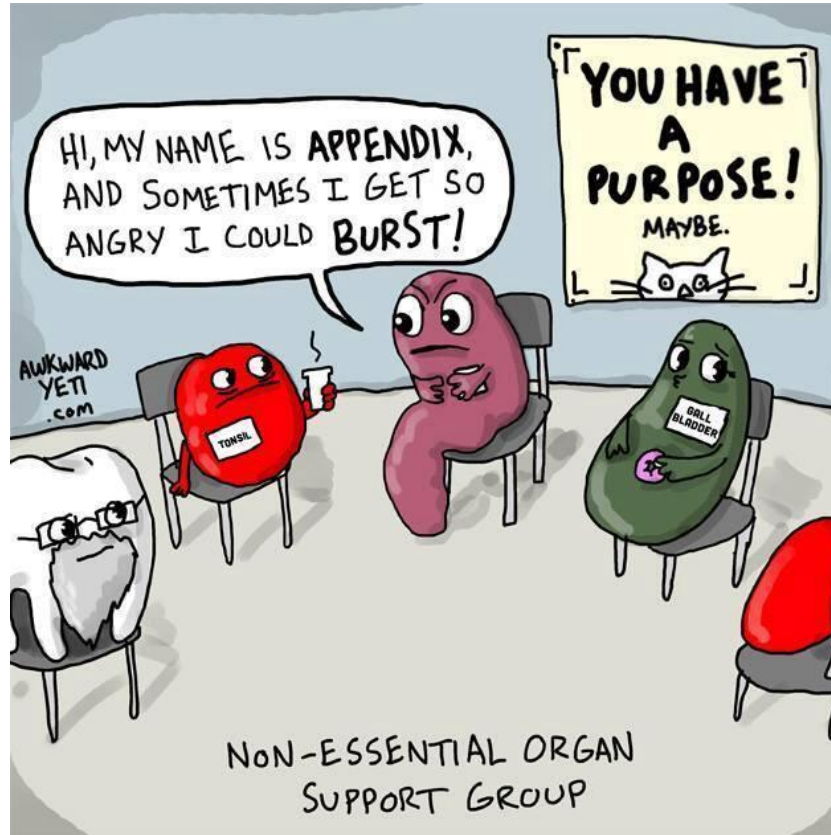
- Splenic laceration
- Subcapsular hematoma
- Hemoperitoneum



Key Take-Home Points

- Most complications present within 24–72 hours
- Sedation and prep issues are common and preventable
- Severe, worsening abdominal pain is a red flag
- CT imaging is essential to diagnose perforation vs post polypectomy syndrome
 - Early surgical involvement improves outcomes!

Thank You!



References

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- Sharma VK, Nguyen CC, Crowell MD, et al. A national study of cardiopulmonary unplanned events after GI endoscopy. *Gastrointest Endosc*. 2007;66(1):27-34.
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