



An Interesting Case of Pneumatosis Cystoides Intestinalis Diagnosed After Polypectomy

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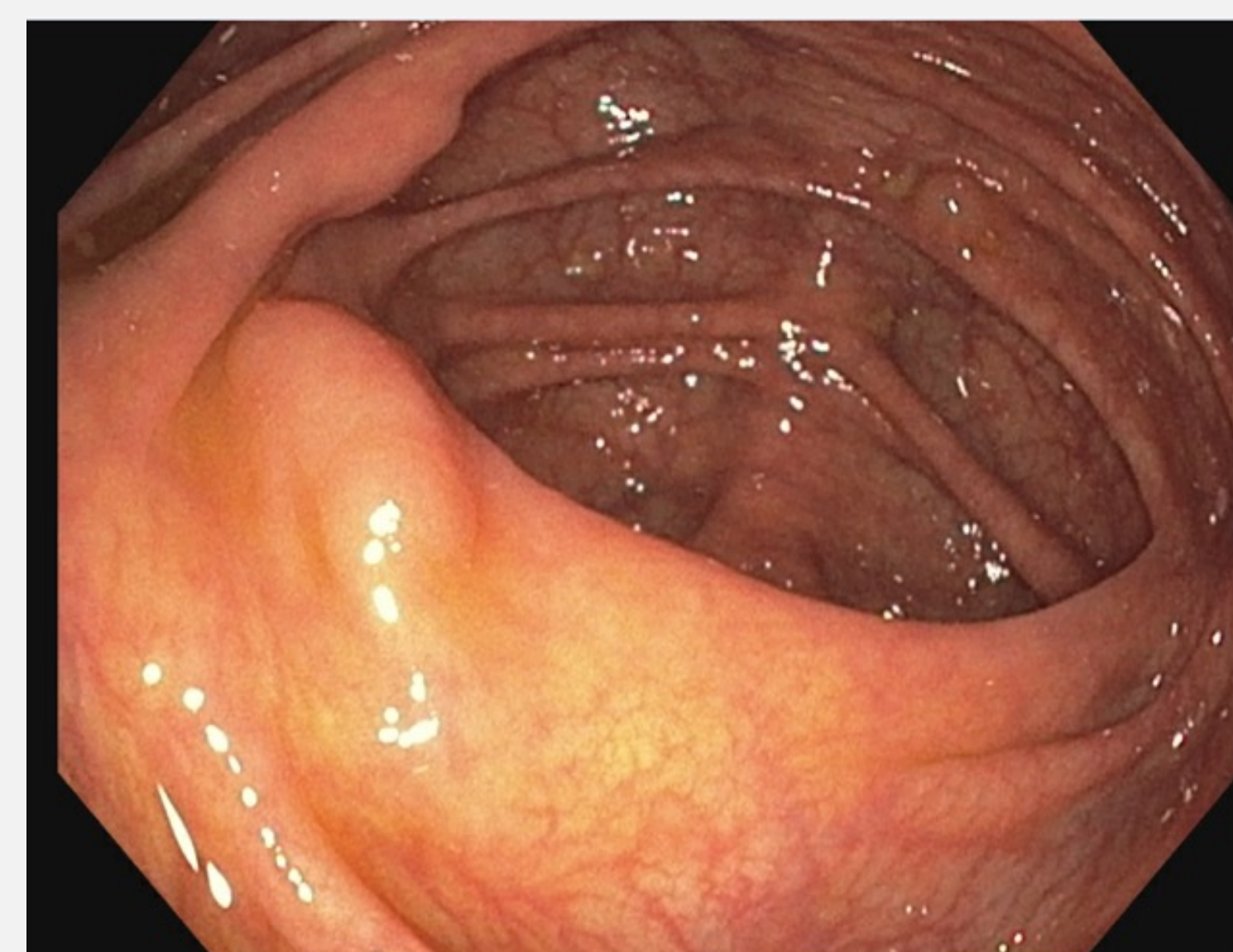
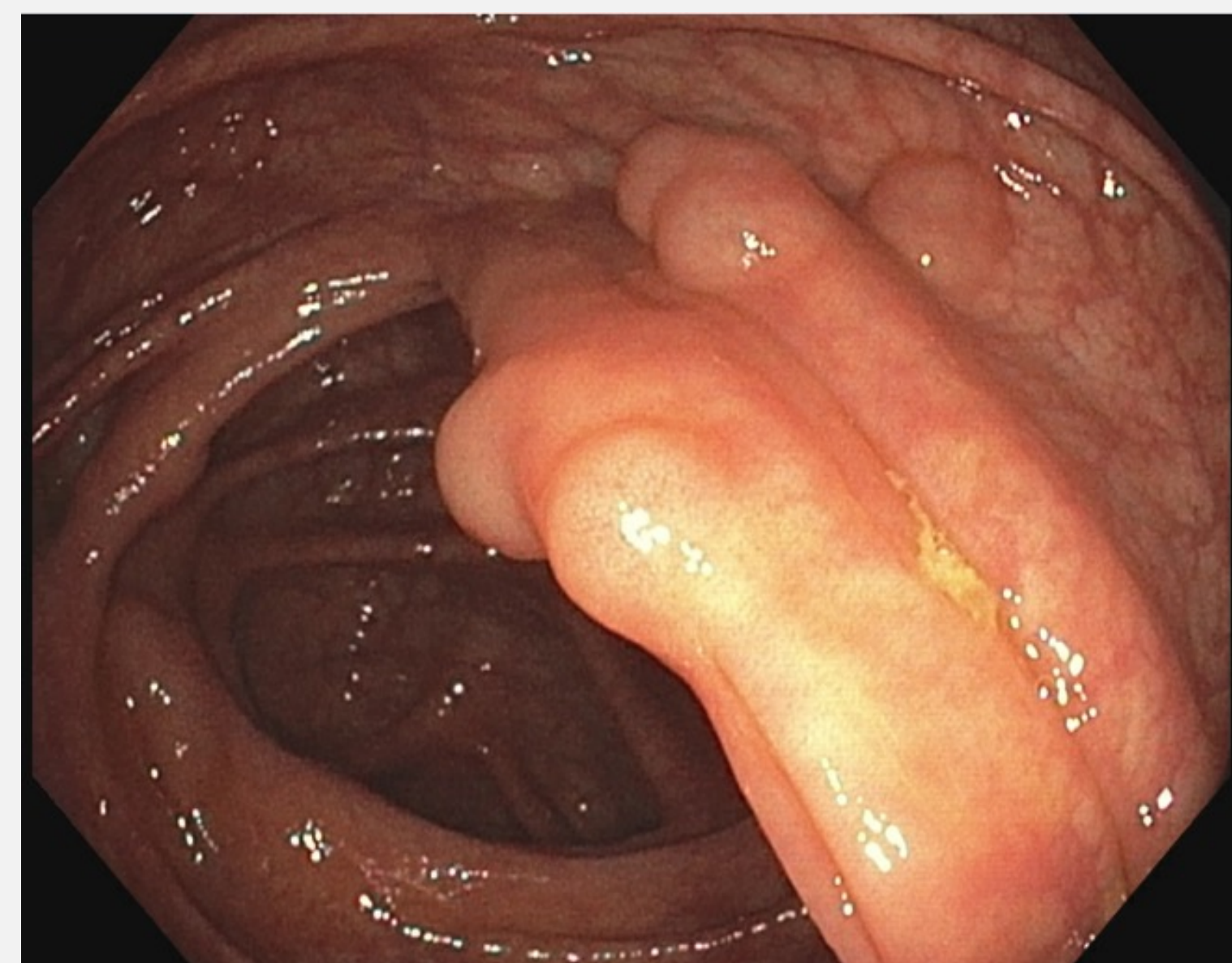
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Background & Purpose

- PCI is not well understood and causes include mechanical defects, gas produced from bacteria, or gas from a pulmonary source
- Idiopathic (15% of cases), or secondary to another medical condition (85% of cases)
- Symptoms attributed to PCI include diarrhea, bloody stools, abdominal pain, constipation, weight loss and tenesmus
- Most common histologic findings associated with PCI includes gas cysts, multinucleated giant cells, macrophages, and pericystic inflammatory changes
- Primary PCI creates a cystic pattern within the intraluminal wall and secondary causes creates a linear pattern

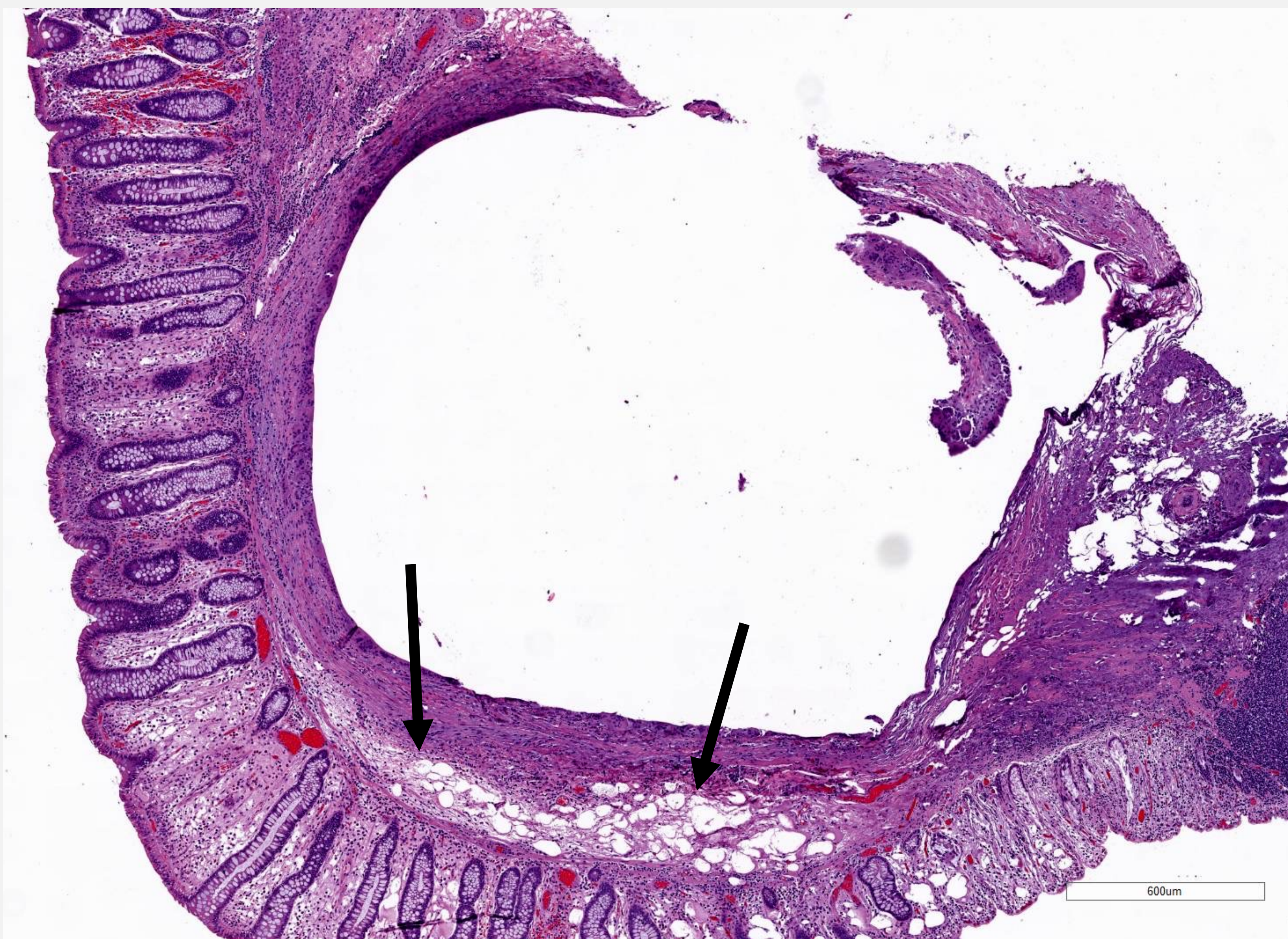
Clinical Presentation

- 42-year-old African male underwent colonoscopy for new constipation and a first-degree relative history of colorectal cancer at age 45
- Colonoscopy revealed 12mm sessile polypoid lesion on the ileocecal valve, with a normal terminal ileum, which underwent endoscopic resection using snare polypectomy
- Five additional polypoid lesions seen in the ascending colon ranging from 5-12mm were removed with snare polypectomy
- Pathology of these lesions showed empty appearing submucosal cystic structures with peripheral foreign body, and giant cell reaction diagnostic for localized PCI



Pneumatosis Cystoides Intestinalis (PCI)

- Prevalence of this condition in an autopsy series showed 0.03% in the general population. Recent studies have shown that there is a higher incidence of this lesion in the colon with a prevalence between 46%-61.8%
- On X-ray, PCI is characterized by radiolucency within the wall of the GI tract and found in 2/3 of patients. CT imaging is the best imaging modality for diagnosing PCI
- Treatment focuses on the associated illness inciting PCI. Common associated illnesses include trauma or mechanical causes, inflammatory, autoimmune, infectious, pulmonary, drug induced, or idiopathic
- In PCI that is not associated with surgical conditions, inspired oxygen is used as a treatment
- Oxygen therapy is considered the first line approach for treatment and second line therapy is surgical treatment and is required in the setting of pneumoperitoneum
- Cysts release gases within them and refill with oxygen that is then metabolized resulting in cyst resolution



Discussion

- Pneumatosis cystoides intestinalis (PCI) is characterized by the presence of gaseous cysts containing nitrogen, hydrogen, and carbon dioxide
- Patients may have symptoms of abdominal pain, obstruction, or bleeding but most individuals are asymptomatic
- Endoscopic appearance can be similar to other lesions such as sessile serrated adenomas
- In this case, the patient’s constipation could be related to his underlying diagnosis of PCI
- Bacterial gas production can either be caused from bacterial invasion or from intraluminal gas content created by a gradient between intraluminal and serum partial pressures
- The effectiveness of oxygen therapy could be due to its effect on anaerobic bacterial or the ability for oxygen to facilitate diffusion of gases out of the pneumocysts
- Complications include obstructions from gaseous cysts, and rarely, rupture of these cysts can cause pneumoperitoneum

Conclusion

In patients with nonspecific abdominal symptoms, an endoscopy could be warranted to assess for primary PCI which if left untreated can cause complications

References

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