A Young Gut Gone Rogue: Ischemic Colitis in a Healthy 22-Year-Old

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INTRODUCTION

Ischemic colitis (IC) is the most common form of gastrointestinal (GI) ischemia, resulting from compromised colonic blood flow. Predisposing factors include trauma, thrombosis, systemic hypoperfusion, mechanical obstruction, and certain medications. We present a rare case of IC in an otherwise healthy young adult without identifiable risk factors.

CASE REPORT

A 22-year-old male with no significant medical history presented with sudden-onset abdominal pain and hematochezia. He denied significant alcohol use, recreational drugs, NSAID use, or recent antibiotics but reported vaping nicotine for three years and social alcohol consumption. A CT scan of the abdomen and pelvis revealed findings consistent with ischemic colitis. Emergent exploratory laparotomy showed diffuse inflammation of the transverse, descending, and sigmoid colon, along with dilated and hyperemic small bowel loops, suggesting a global inflammatory process. His hospital course was complicated by shock requiring vasopressors and acute renal failure needing dialysis.

Colonoscopy with biopsies confirmed active colitis with ulceration and ileitis. Infectious, autoimmune (vasculitis), and hypercoagulable workups were unremarkable, and urine toxicology was negative. Fecal calprotectin was significantly elevated at 3710 µg/g. Biopsies confirmed the diagnosis of acute ischemic colitis. The patient improved with supportive care and was discharged with plans for outpatient gastroenterology follow-up and a repeat colonoscopy.

RESULTS

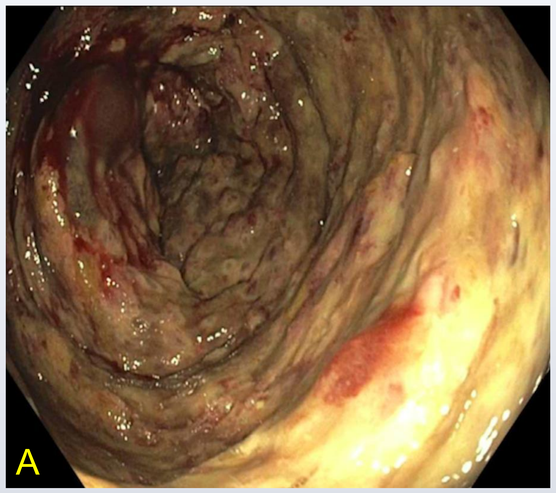

Image A: Transverse Colon

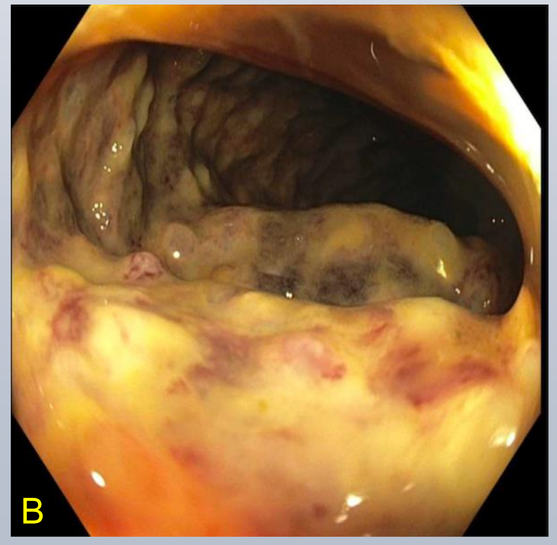

Image B: Sigmoid Colon

Both images revealing diffuse severe mucosal changes characterized by congestion (edema), erosions, erythema, friability, granularity, loss of vascularity, mucus and deep ulcerations.

DISCUSSION

Acute ischemic colitis typically occurs in older adults with risk factors such as cardiovascular disease, diabetes, and hypercoagulable states. In this young patient, transient hypoperfusion from hemodynamic instability and vasopressor use likely contributed. Ketamine administration may have further affected cardiovascular dynamics. Although comprehensive evaluations were negative, transient mesenteric thrombosis or microvascular injury during systemic inflammation cannot be excluded.

Notably, animal studies suggest that chronic vaping induces oxidative stress and colonic inflammation, possibly compromising mucosal integrity and predisposing to ischemic injury. This case underscores the multifactorial nature of ischemic colitis in young adults and highlights vaping as a potential, emerging risk factor.

Conclusion

In young patients with unexplained ischemic colitis, a broad differential should be maintained. Vaping may represent an emerging, underrecognized risk factor for mucosal vulnerability. Supportive care remains the mainstay of treatment, but awareness of nontraditional exposures is critical. Further research is warranted into the gastrointestinal effects of vaping and its role in ischemic injury.

RESOURCES/REFERENCES

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