UC Irvine
Clinical Practice and Cases in Emergency Medicine

Title
A Woman with Abdominal Pain

Permalink
https://escholarship.org/uc/item/9dj953hg

Journal
Clinical Practice and Cases in Emergency Medicine, 9(3)

Authors
Conrad, Colton
Alouidor, Reginald
Allison, Christopoher

Publication Date
2025-06-08

DOI
10.5811/cpcem.43521

Copyright Information
This work is made available under the terms of a Creative Commons Attribution License, available at https://creativecommons.org/licenses/by/4.0/

Peer reviewed

eScholarship.org Powered by the California Digital Library
University of California

A Woman with Abdominal Pain

Colton Conrad, MD*
Reginald Alouidor, MD‡
Christopher Allison, MD*†

*University of Massachusetts Medical School – TH Chan School of Medicine, Baystate Medical Center Department of Emergency Medicine, Springfield, Massachusetts
†University of Massachusetts Medical School – TH Chan School of Medicine, Baystate Medical Center Department of Critical Care Medicine, Springfield, Massachusetts
‡University of Massachusetts Medical School – TH Chan School of Medicine, Baystate Medical Center Division of Trauma/ Critical Care and Acute Care Surgery, Springfield, Massachusetts

Section Editor: Jacqueline Le, MD
Submission history: Submitted February 20, 2025; Revision received April 10, 2025; Accepted April 18, 2025
Electronically published June 8, 2025
Full text available through open access at http://escholarship.org/uc/uciem_cpcem
DOI: 10.5811/cpcem.43521

Case Presentation: A 28-year-old woman with a history of cocaine and opioid use disorder presented to the emergency department with abdominal pain, nausea, and vomiting for two days. She'd had irregular bowel movements with constipation for quite some time. Physical exam was notable for diffuse peritonitis and melena on digital rectal exam. Patient had a witnessed episode of hematochezia. Computed tomography of the abdomen and pelvis with intravenous contrast demonstrated sigmoid colon intussusception, and the patient underwent emergent surgery for definitive treatment. Specimen was sent to surgical pathology and revealed no lead point.

Discussion: While sigmoid intussusception is not a rare finding, it is exceedingly rare in young adult patients who do not have a pathologic lead point. Lead points are areas of inflammation, lesions, or masses that snag the bowel and initiate the process of telescoping that ultimately results in an intussusception. This patient was not found to have such a lead point on gross examination during surgery or on extensive specimen examination in the pathology lab. Instead, her sigmoid intussusception is hypothesized to be secondary to decreased gut motility in the setting of chronic opioid use disorder. [Clin Pract Cases Emerg Med. 2025;9(3):358-360]

Keywords: *intussusception; colectomy; gastroenterology; polysubstance use.*

CASE PRESENTATION

A 28-year-old woman with a history of cocaine and heroin use presented with abdominal pain, nausea, and vomiting worsening for two days. On physical exam, the patient was noted to have peritonitis in all four quadrants of the abdomen with absent bowel sounds and melanotic stool on digital rectal exam, as well as a witnessed episode of hematochezia. Vital signs were significant for tachycardia. Laboratory studies were significant only for a leukocytosis of 13.1 x 10^3/liter (L) (reference range: 4.5-11.0 x 10^3/L). The patient received antibiotics and antiemetic therapy, as well as pain control. Computed tomography (CT) of the abdomen and pelvis with intravenous (IV) contrast revealed the diagnosis of intussusception involving the sigmoid colon, and the transverse and descending colon, as well as part of the omentum (Images 1 and 2). She underwent emergency surgery for definitive treatment (Image 3).

DISCUSSION

Computed tomography with IV contrast demonstrated sigmoid colon intussusception involving the transverse and descending colon, as well as parts of the omentum with evidence of ischemic necrosis. The patient underwent emergent sigmoidectomy, sub-total colectomy, partial omentectomy, and creation of end-ileostomy. The resected specimen was evaluated by pathology but demonstrated no lead point. Our patient had an extensive history of constipation, likely secondary to her opioid dependence.



Image 1. Sagittal computed tomography view showing edematous sigmoid colon (black arrow) containing omentum (white arrow).

CPC-EM Capsule

What do we already know about this clinical entity?
Intussusception is relatively rare in adults and is generally associated with older age, adhesions from prior surgeries, inflammatory bowel disease, or malignancy.

What is the major impact of the image(s)?
The combination of computed tomography images and gross specimen photograph help the reader correlate typical radiographic findings with the physiologic process.

How might this improve emergency medicine practice?
This case serves as a reminder to consider atypical presentations of intussusception especially in young patients with risk factors such as chronic opioid use.

Opioids act on the mu opioid receptors within the small and large bowel, leading to decreased smooth muscle contractions, diminished colonic peristalsis, and prolonged transit times.[1] We hypothesize chronic opioid use contributed to her intussusception. Only one other case report in recent literature describes a patient with intussusception without pathologic lead point in the setting of chronic cocaine and opioid dependence.[2] The prevalence of fentanyl contamination in cocaine and methamphetamine is estimated to be greater than 10%.[3] Thus, patients who primarily use stimulants may unknowingly consume opioids on a regular basis, putting them at risk for decreased gut motility.

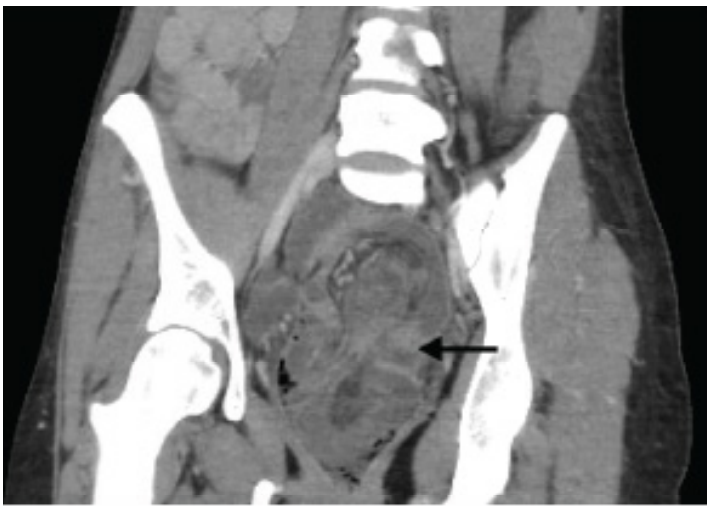


Image 2. Coronal computed tomography view showing edematous sigmoid colon containing intussuscepted descending colon (black arrow).



Image 3. Excised sigmoid, descending, and transverse colon, showing stacked layers of bowel within the sigmoid colon with ischemic necrosis and hemorrhagic walls (white arrow).

Intussusception in adults is rare, with an incidence of 2-3 cases per million annually, and comprising only 5% of all cases. Approximately 80-90% of adult intussusception cases extend from pathologic lead points that may represent inflammatory bowel disease, diverticular disease, polyps, or malignancy.[4] The remaining 10-20% of intussusception cases without a pathologic lead point are termed "idiopathic." The diagnostic modality of choice is CT with IV contrast, which may elucidate an existing lead point. Definitive treatment is resection via laparotomy, which exposes the entire colon for evaluation.[5]

The authors attest that their institution requires neither Institutional Review Board approval, nor patient consent for publication of this case report. Documentation on file.

Address for Correspondence: Colton Conrad, MD, University of Massachusetts Medical School – TH Chan School of Medicine, Baystate Medical Center, Department of Emergency Medicine, 759 Chestnut Street, Springfield, MA 01199. Email: coltonmichaelconrad@gmail.com

Conflicts of Interest: By the *CPC-EM* article submission agreement, all authors are required to disclose all affiliations, funding sources and financial or management relationships that could be perceived as potential sources of bias. The authors disclosed none.

Copyright: © 2025 Conrad et al. This is an open access article distributed in accordance with the terms of the Creative Commons Attribution (CC BY 4.0) License. See: http://creativecommons.org/licenses/by/4.0/

REFERENCES

1. Galligan JJ and Sternini C. Insights into the role of opioid receptors in the GI tract: experimental evidence and therapeutic relevance. *Handb Exp Pharmacol*. 2017;239:363-78.
2. Satoi S, Wilson S, Park E, et al. Intussusception resulting from uncontrolled severe opioid-induced constipation and/or chronic cocaine use. *Am J Gastroenterol.* 2021;116:S1448.
3. Wagner KD, Fiuty P, Page K, et al. Prevalence of fentanyl in methamphetamine and cocaine samples collected by community-based drug checking services. *Drug Alcohol Depend*. 2023;1;252:110985.
4. Marinis A, Yiallourou A, Samanides L, et al. Intussusception of the bowel in adults: a review. *World J Gastroenterol*. 2009;15(4):407-11.
5. Huang BY and Warshauer DM. Adult intussusception: diagnosis and clinical relevance. *Radiol Clin North Am*. 2003;41(6):1137-51.