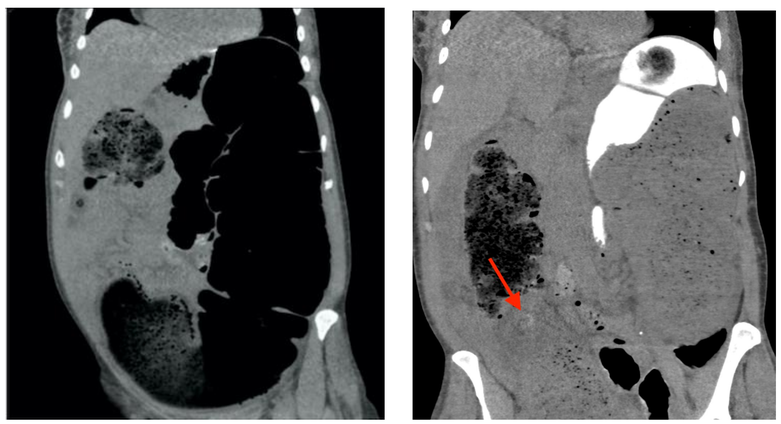
A case of clozapine-associated cecal volvulus in a 58-year-old female with schizoaffective disorder

Sharlo L. Bayless MD, Raphael J. Leo MA, MD

Background

- Clozapine is often prescribed for treatment-resistant schizophrenia.
- Impairment of gastrointestinal motility and constipation are common adverse effects associated with clozapine.
- In this case, a patient who was nonadherent to her bowel regimen and also prescribed an anticholinergic agent developed clozapine-associated cecal volvulus
- To our knowledge, this has only been reported once previously.



Left: Abdominal Noncontrast CT Revealing Colon Dilation With Exhaustion Extending to Left Upper and Lower Quadrants.
Right: CT Image Revealing Mesenteric Swirling (Red Arrow)

Case Summary

- A 58-year-old female with schizoaffective disorder, bipolar type was hospitalized for constipation, abdominal distention, and bilious vomiting.
- Her history was significant for intermittent constipation and an anatomically large cecum

Surgical Image Revealing Cecal Volvulus and Appendix, Serosal Tearing (Showing Impending Rupture, and Normal Caliber Transverse Colon

- Medications included clozapine 575mg daily and diphenhydramine 50mg PO QID PRN.
- Bowel regimen: senna/docusate sodium 8.6/50 BID and polyethylene glycol daily.
- CT imaging of the abdomen/pelvis with rectal contrast showed progression of the contrast to the splenic flexure, and mesenteric swirling in the right lower quadrant adjacent to a dilated loop of bowel and extending to the left hemiabdomen with a large stool burden.
- Exploratory laparotomy confirmed cecal volvulus and tearing of the serosa of the intestine, indicating impending rupture.
- A right hemicolectomy was performed without complications. Bowel motility was restored, and she progressed well post-operatively.

Discussion

- A low threshold of suspicion for potentially emergent surgical conditions is warranted in patients on clozapine who develop vomiting, severe constipation, or abdominal distention and pain.
- Unrecognized and untreated, cecal volvulus can lead to vascular strangulation, gangrenous intestines, or death.
- This case highlights that co-administered anticholinergic agents and non-adherence with a bowel regimen, in addition to predisposing factors, can have a cumulative effect on a patient's risk.

References

1. Mortimer AM. Antipsychotic treatment in schizophrenia: atypical options and NICE guidance. *Eur Psychiatry*. 2003;18(5):209-219.
2. Siskind D, McCartney L, Goldschlager R, Kisely S. Clozapine v. first- and second-generation antipsychotics in treatment-refractory schizophrenia: systematic review and meta-analysis. *Br J Psychiatry*. 2016;209(5):385-392.
3. Howes OD, McCutcheon R, Agid O, et al. Treatment-Resistant Schizophrenia: Treatment Response and Resistance in Psychosis (TRRIP) Working Group Consensus Guidelines on Diagnosis and Terminology. *Am J Psychiatry*. 2017;174(3):216-229.
4. De Berardis D, Rapini G, Olivieri L, et al. Safety of antipsychotics for the treatment of schizophrenia: a focus on the adverse effects of clozapine. *Ther Adv Drug Saf* 2018;9(5):237-256. doi: 10.1177/2042098618756261.
5. Novartis Pharmaceuticals Canada Inc. Clozaril Product Monograph. Revised, 2004.
6. Every-Palmer S, Inns SJ, Grant E, Ellis PM. Effects of Clozapine on the gut: cross-sectional study of delayed gastric emptying and small and large intestinal dysmotility. *CNS Drugs*. 2019;33(1):81-91.
7. Hibbard KR, Propst A, Frank DE, Wyse J. Fatalities associated with clozapine-related constipation and bowel obstruction: a literature review and two case reports. *Psychosomatics*. 2009;50(4):416-419.
8. Aneja J, Varshney V, Ks S, et al. Clozapine triggering cecal volvulus in a patient with malrotation and schizophrenia: side effect that needs emphasis. *Cureus*. 2020;12(5):e7971.
9. Tampakis A, Droeser RA, Tampaki EC, et al. A case of cecal volvulus mimicking ogilvie syndrome in a hospitalized patient with a pelvis fracture. *Ann Med Surg (Lond)*. 2016;7:55-7.
10. Hayes G, Gibler B. Clozapine-induced constipation. *Am J Psychiatry*. 1995;152(2):298.

University at Buffalo The State University of New York

Department of Psychiatry
Jacobs School of Medicine and Biomedical Sciences