

CLOZAPINE INDUCED PARALYTIC ILEUS

VEENA NAYAK, BHARTI CHOGTU, VIRUPAKSHA DEVARAMANE*,VASUDEVA S*,P. V. BHANDARY*

For author affiliations, see end of text
This paper is available online at www.jprhc.in

ABSTRACT:

Clozapine is an atypical antipsychotic drug used for the treatment of schizophrenia in patient not responding to other antipsychotics. Dry mouth, constipation, loss of accommodation and urinary retention are the common side effects encountered with this drug. Here we are reporting a case of paralytic ileus secondary to clozapine.

Key words: Clozapine, paralytic ileus

INTRODUCTION:

Clozapine is an atypical antipsychotic agent 1 . Clozapine acts by antagonizing dopamine receptors especially at limbic rather than at striatal dopamine receptors, hence clozapine has lesser extrapyramidal side effects 2. It antagonizes adrenergic, cholinergic, histaminergic and serotonergic receptors. Clozapine causes anticholinergic effects by blocking muscarinic (M3) receptors 1. Clozapine has marked anticholinergic activity which is comparable to that of benztrapine which is also responsible for lesser incidence of extrapyramidal effects 3, and concurrent use with other anticholinergic drugs can increase side effects such as dry mouth, constipation, loss of accommodation and urinary retention. Because of its adverse effects like agranulocytosis and seizures it is reserved for treatment of patients not responding to other antipsychotics 2.

Constipation is a common side effect in patients taking clozapine, and most of the time, simple advice about diet and fluid intake is all that is required.4 There have even been reports of death as a result of constipation and fecal

impaction 5,6, 7. There are also reports of intestinal occlusion 8, 9,10, , postoperative paralytic ileus, 11, perforated colon and peritonitis 12, gastric outlet obstruction 13 and necrotizing colitis 14 following clozapine administration. Here we present a case of paralytic ileus due to clozapine .

CASE HISTORY:

A 35 year old male, known case of schizophrenia on clozapine presented to the casualty with inability to pass stools, progressive abdominal distension and not talking since 5 days. The patient was on different antipsychotics for the past 6 years. But, had not shown any improvement inspite of change in the antipsychotics. Hence, he was started on clozapine 50 mg and levosulpiride 50 mg since the past 15 days . On examination the patient was conscious and had stable vitals. Abdomen was distended, tympanic on percussion, and bowel sounds were sluggish. X ray of abdomen showed dilated small and large bowel loops (figure). Ultrasonography showed fluid filled small bowel loops with sluggish peristalsis in the pelvis and left lumbar region. A provisional diagnosis of clozapine induced paralytic ileus was made. Clozapine was stopped and the patient was managed conservatively with intravenous fluids, analgesics and ryle's tube drainage. The patient responded well.

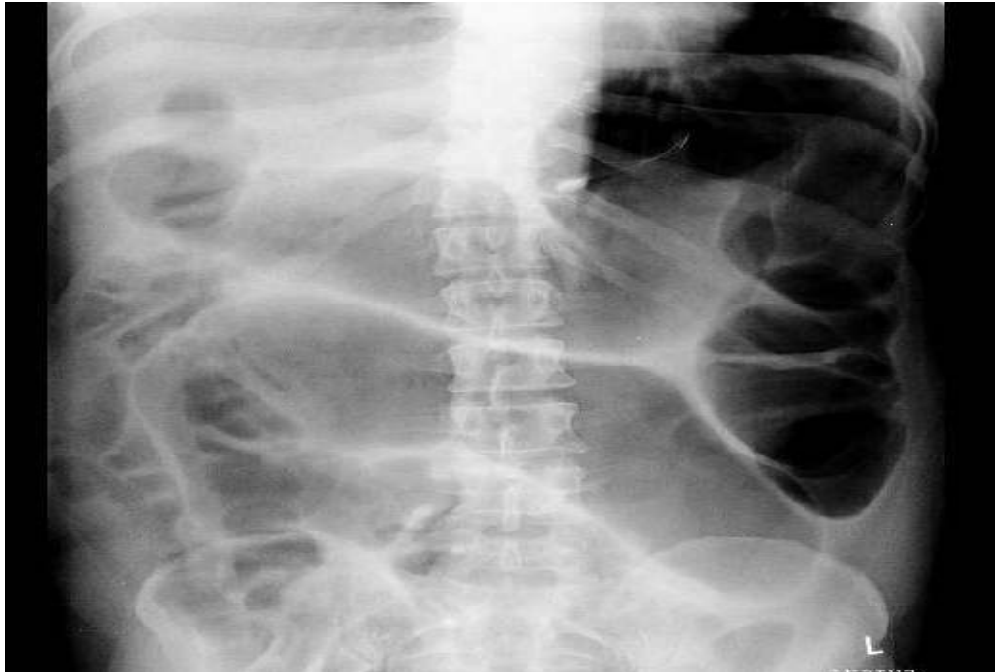


Fig: X Ray showing dilated small and large bowel loops

DISCUSSION:

Constipation is very common side effect in patients on antipsychotics due to their anticholinergic action. Poor bowel habits like low fibre diet, poor fluid intake and lack of exercises, which is common among psychotics, and the anticholinergic action of clozapine could have precipitated the paralytic ileus. In addition patient was taking levosulpiride which has minimal anticholinergic action¹⁵, hence it is unlikely to have caused paralytic ileus. There was no history of constipation in this patient despite taking antipsychotics for the past six years. Many cases of constipation due to clozapine have been reported and its mechanism of action as stated makes clozapine the

suspected drug. According to WHO causality definition this adverse drug reaction is categorized as a probable reaction to the drug.¹⁶

Constipation can lead to various life threatening complications like intestinal occlusion, paralytic ileus etc. Hence patients on clozapine complaining of constipation should not be neglected¹⁷. Therefore doctors prescribing antipsychotics should advice good bowel habits like good fibre intake, exercises and fluid intake.

REFERENCES:

- 1) Heltzer H. Antipsychotic agents and lithium. In: Katzung BG, Masters SB, Trevor AJ, editors. Basic and clinical pharmacology. 11th ed. Singapore: McGraw-Hill companies; 2009. pp493-499.
- 2) Rondla S, Crane S. A case of clozapine induced paralytic ileus. *Emerg Med J* 2007; 24:e12-e13.
- 3) De Leon J, White A, Josiassen R, Diaz F, Simpson G. Serum antimuscarinic activity during clozapine treatment. *J Clin Psychopharmacology* 2003; 23:336-41.
- 4) Young CR, Bowers MB, Mazure CM. Management of the adverse effects of clozapine. *Schizophrenia Bulletin* 1998; 24(3): 381-390.
- 5) Hayes G, Gibler B. Clozapine induced constipation. *Am J Psychiatry* 1995; 152:298
- 6) Drew L, Herdson P. Clozapine and constipation: a serious issue. *Aust NZ J Psychiatry* 1997; 31(1): 149-150.
- 7) Levin TT, Barrett J, Mendelowitz A. Death from clozapine induced constipation: case report and literature review. *Psychosomatics* 2002; 43(1): 71-73.

8) Theret I, Germain ML, Burde A. Current aspects of the use of clozapine in the Chalons-sur-Marne psychiatric hospital: intestinal occlusion with clozapine. [French]. *Annales Medico-Psychologiques* 1995; 153(7): 474-477.

9) Tang WK, Ungvari GS. Clozapine-induced intestinal obstruction. *Aust NZ J Med* 1999; 29(4): 560.

10) Lu MK. Clinical analysis in the main side effects of clozapine: enclosed 600 cases report]. [Chinese]. *Chinese Journal of Neurology and Psychiatry* 1991; 2492: 71-74

11). Erickson B, Morris DM. Clozapine-associated postoperative ileus: case report and review of the literature. *Arch Gen Psychiatry* 1995; 52(6): 508-509

12. Freudenreich O, Goff DC. Colon perforation and peritonitis associated with clozapine. *J Clin Psychiatry* 2000; 61(12): 950-951.

13. Schwartz BJ, Frisolone JA. A case report of clozapine-induced gastric outlet obstruction. *Am J Psychiatry* 1993; 150(10): 1563.

14. Shammi CM, Remington G. Clozapine-induced necrotizing colitis. *J Clin Psychopharmacol* 1997; 17(3): 230-231. 15. Martindale. The complete drug reference, 35th ed. London: Pharmaceutical Press; 2007 16. Edwards IR,

Aronson JK. Adverse drug reactions: Definitions, diagnosis and management. Lancet 2000;356:1255-59. 17. Pelizza L, De Luca P, La Pesa M, Borella D. Clozapine – induced intestinal occlusion : a serious side effect . Acta Biomed 2007;78:144-148.

AUTHORS AFFILIATION AND ADDRESS FOR CORRESPONDENCE: Dept of Pharmacology, Kasturba Medical College, Manipal University, Manipal. Psychiatrist, Dr. A. V. Baliga Memorial Hospital, Udupi.,
Corresponding Author: Dr. Veena Nayak ,
Dept of Pharmacology, Kasturba Medical College,
Manipal University, Manipal, Karnataka,
Email : drveenayak@rediffmail.com
Tel : 9844773573