Indian Journal of Pharmacy Practice., 2026; 19(3):438-441.
https://www.ijopp.org

Case Report

Haloperidol-Induced Extrapyramidal Symptoms in a Young Male with Alcohol Dependence Syndrome and Emotionally Unstable Personality Disorder

Arunkumar K[1], Haripriya Gurumoorthy[2,*]

[1]Department of Psychiatry, Government Medical College, Orathur, Nagapattinam, Tamil Nadu, INDIA.
[2]Department of Pharmacy Practice, EGS Pillay College of Pharmacy, Nagapattinam, Tamil Nadu, INDIA.

ABSTRACT

Aim/Background: To report a case of haloperidol-induced Extrapyramidal Symptoms (EPSEs) in a young male with alcohol dependence syndrome and emotionally unstable personality disorder. **Materials and Methods:** A 27-year-old male with chronic alcohol use, seizure disorder, and personality disorder was initiated on haloperidol during complicated alcohol withdrawal. ADRs were assessed using WHO-UMC and Naranjo scales. **Results:** The patient developed tremors within 24 hr despite prophylactic trihexyphenidyl. Haloperidol was discontinued and replaced with quetiapine, leading to complete symptom resolution. Causality assessment indicated a probable reaction. **Conclusion:** Even low-dose haloperidol can induce EPSEs in vulnerable populations. Prompt identification, drug withdrawal, and substitution with safer antipsychotics are essential.

Keywords: Haloperidol, Extrapyramidal Symptoms, Alcohol Dependence, Diazepam, Naranjo Scale, WHO-UMC, Adverse Drug Reaction.

Correspondence:
Haripriya Gurumoorthy
Department of Pharmacy Practice,
EGS Pillay College of Pharmacy,
Nagapattinam, Tamil Nadu, INDIA.
Email: priyahari24302@gmail.com

Received: 16-12-2025;
Revised: 22-01-2026;
Accepted: 09-03-2026.

INTRODUCTION

Haloperidol, a typical antipsychotic of the butyrophenone class, is effective in treating schizophrenia and acute psychosis but is often limited by Extrapyramidal Symptoms (EPS) (Kane *et al*., 2009; Correll and Schenk, 2008). The mechanism involves dopamine D2 receptor blockade in the nigrostriatal pathway, disturbing the dopaminergic-cholinergic balance and producing tremor (Kane *et al*., 2009; Correll and Schenk, 2008). Among these, drug-induced parkinsonism is common, presenting with tremor, rigidity, and bradykinesia resembling idiopathic Parkinson's disease (Miyamoto *et al*., 2012; Shin and Chung, 2012). Prompt recognition of haloperidol-induced tremor is essential, as dose adjustment or switching to atypical antipsychotics can prevent disability.

CASE PRESENTATION

A 27-year-old male with a 10-year history of chronic alcohol use (~360 mL/day of liquor) and a known case of seizure disorder (on irregular phenytoin therapy) presented with altered sensorium, appetite loss, and one episode of vomiting. He also had uprolling of eyes with involuntary body movements lasting 40 min, suggesting an alcohol withdrawal seizure. Additional behavioral symptoms included sleep disturbance, anger outbursts, and self-injurious behavior.

On examination, he was afebrile, hemodynamically stable, and neurologically intact. Mental Status Examination:

- **Mood:** Euthymic
- **Thought and perception:** Relevant
- **Sleep:** Decreased
- **Appetite:** Normal

Noted anger outbursts, history of aggressive behavior including weapon use and self-injury

Based on his clinical features, he was diagnosed with:

- Alcohol Dependence Syndrome-Complicated Withdrawal.
- Emotionally Unstable Personality Disorder.
- Known case of seizure disorder.
- The patient was started on a treatment regimen including:
- Haloperidol 1.5 mg OD (for aggression)

DOI: 10.5530/ijopp.20260588

Table 1: Laboratory investigation of the Patient.

Parameter	Value	Normal Range	Interpretation
WBC	6.0×10^3/µL	$4.0\text{-}11.0\times10^3$/µL	Normal-no infection
RBC	3.81×10^6/µL	$4.5\text{-}5.9\times10^6$/µL	Mild anemia
Hemoglobin	11.8 g/dL	13.5-17.5 g/dL	Mild normocytic anemia
Hematocrit	35.7%	41-50%	Consistent with anemia
MCV	93.7 fL	80-100 fL	Normocytic
MCHC	33.1 g/dL	32-36 g/dL	Normal
Platelets	159×10^3/µL	$150\text{-}400\times10^3$/µL	Low-normal
RBS	102 mg/dL	70-140 mg/dL (random)	Normal
Urea	25 mg/dL	15-40 mg/dL	Normal
Creatinine	0.89 mg/dL	0.7-1.3 mg/dL	Normal
Total Bilirubin	0.77 mg/dL	0.2-1.2 mg/dL	Normal
Direct Bilirubin	0.32 mg/dL	0.0-0.4 mg/dL	Normal
SGOT (AST)	19 IU/L	5-40 IU/L	Normal
SGPT (ALT)	23 IU/L	5-45 IU/L	Normal
Sodium	138 mEq/L	135-145 mEq/L	Normal
Potassium	3.7 mEq/L	3.5-5.0 mEq/L	Normal
Chloride	105 mEq/L	98-107 mEq/L	Normal

- Diazepam 5 mg BD
- Trihexyphenidyl 2 mg ½ OD (to prevent EPSE)
- Olanzapine 5 mg HS
- IV Thiamine 200 mg/day
- Phenytoin 100 mg IV TID

However, the patient developed tremors the next day, suggestive of extrapyramidal side effects, despite prophylactic trihexyphenidyl. The haloperidol was promptly discontinued, and the patient was managed with quetiapine 25 mg and diazepam 5 mg, leading to complete resolution of symptoms within 24 hr.

Laboratory Investigations and Interpretation

Interpretation: Overall, the lab results revealed normocytic anemia, possibly due to chronic alcohol use. Liver and renal functions were intact. Electrolyte levels and seizure threshold-related labs were within normal range, ruling out metabolic causes for the seizure or tremor. The haematological and biochemical investigations are summarised in the Table 1.

Adverse Drug Reaction (ADR)

- **Suspected drug:** Haloperidol.
- **Adverse event:** Tremor suggestive of EPSE.
- **Time to onset:** Within 24 hr of starting haloperidol.
- **Action taken:** Drug withdrawn, replaced with quetiapine.
- **Outcome:** Recovered within 24 hr.

Causality Assessment

WHO-UMC Causality Assessment

Result: Probable/Likely

Reasonable time relationship between drug intake and reaction.

No strong alternative cause.

Objective clinical evidence presents (tremor).

The causality assessment for the reported adverse reaction was performed using the Naranjo Adverse Drug Reaction Probability Scale (Table 2), which indicated a probable relationship between the suspected drug and the observed symptoms.

Interpretation: Probable ADR (Score 5-8)

Causality of adverse drug reactions was assessed using the WHO-UMC scale (Miyamoto *et al*., 2012) and Naranjo algorithm (Shin and Chung, 2012).

DISCUSSION

Haloperidol, a first-generation (typical) antipsychotic, is associated with a high incidence of Extrapyramidal Symptoms (EPS) due to its strong D2 receptor blockade in the nigrostriatal pathway (Muench and Hamer, 2010) Symptoms may include

Table 2: Naranjo Adverse Drug Reaction Probability Scale Assessment.

Question	Yes/ No	Score
1. Previous conclusive reports on this reaction?	Yes	1
2. Did the adverse event occur after the drug was given?	Yes	2
3. Did the reaction improve on discontinuation?	Yes	1
4. Did the reaction reappear on re-administration?	No	0
5. Are alternative causes likely?	No	2
6. Did the reaction reappear with a placebo?	Not done	0
7. Was drug level detected in blood?	Not done	0
8. Was the reaction worse with increased dose or less with decreased dose?	Not done	0
9. Did the patient have a similar reaction to a similar drug?	No	0
10. Was the reaction confirmed by objective evidence?	Yes	1
Total Score		7

tremors, rigidity, bradykinesia, and akathisia, resembling drug-induced parkinsonism.

Despite the use of trihexyphenidyl, which is commonly co-prescribed to reduce EPS, the patient developed tremor within 24 hr of haloperidol initiation. Risk factors include:

Use in young males with underlying neurological disorders.

History of irregular antiepileptic drug compliance.

Alcohol withdrawal, which itself can mimic or exacerbate movement disorders.

Timely recognition and withdrawal of the offending agent, along with benzodiazepine support and switch to second-generation antipsychotic (quetiapine), led to complete recovery.

This case reinforces the need for close monitoring when prescribing typical antipsychotics, especially in patients with:

- Underlying seizure disorder.
- Alcohol use disorder.
- Psychiatric comorbidities.

Atypical antipsychotics like quetiapine and olanzapine have a lower risk of EPS and may be preferred in such vulnerable groups (Tarsy and Baldessarini, 2006).

CONCLUSION

This case highlights the occurrence of haloperidol-induced extrapyramidal side effects, even at a low dose, in a young adult with alcohol dependence and seizure disorder. Prompt identification, withdrawal of the offending drug, and appropriate substitution with safer alternatives led to full recovery. Use of WHO-UMC and Naranjo scales strengthens the clinical causality assessment. Rational drug selection and ADR monitoring are vital components of safe psychopharmacological practice.

Clinical Pharmacist's Role

- Identified possible ADR related to haloperidol.
- Recommended prompt discontinuation of the offending agent.
- Suggested switch to quetiapine, a second-generation antipsychotic with lower EPS risk.
- Ensured thiamine supplementation to prevent Wernicke's encephalopathy.
- Monitored liver and renal parameters and seizure control.

ACKNOWLEDGEMENT

The authors thank the department of psychiatry, Government Medical College, Orathur, Nagapattinam, for their support in clinical evaluation and case documentation.

ABBREVIATIONS

ADR: Adverse Drug Reaction; **EPS:** Extrapyramidal Symptoms; **EPSE:** Extrapyramidal Side Effects; **WHO-UMC:** World Health Organisation-Uppsala Monitoring Centre.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

SUMMARY

This case demonstrates that haloperidol, even at low doses, can induce extra pyramidal symptoms in alcohol dependence and seizure disorder. Prompt drug withdrawal and substitution with safer alternatives ensured recovery. Vigilant monitoring of ADRs Remains a cornerstone of safe pharmacotherapy.

REFERENCES

Correll, C. U., & Schenk, E. M. (2008). Tardive dyskinesia and new antipsychotics. Current Opinion in Psychiatry, 21(2), 151–156. https://doi.org/10.1097/YCO.0b013e3282f53132

Kane, J. M., Fleischhacker, W. W., Hansen, L., Perlis, R., Pikalov, A., & Assunção-Talbott, S. (2009). Akathisia: An updated review focusing on second-generation antipsychotics. The Journal of Clinical Psychiatry, 70(5), 627–643. https://doi.org/10.4088/JCP.08r04210

Miyamoto, S., Miyake, N., Jarskog, L. F., Fleischhacker, W. W., & Lieberman, J. A. (2012). Pharmacological treatment of schizophrenia: A critical review of the pharmacology

and clinical effects of current and future therapeutic agents. Molecular Psychiatry, 17(12), 1206–1227. https://doi.org/10.1038/mp.2012.47

Muench, J., & Hamer, A. M. (2010). Adverse effects of antipsychotic medications. American Family Physician, 81(5), 617–622.

Shin, H.-W., & Chung, S. J. (2012). Drug-induced parkinsonism. Journal of Clinical Neurology, 8(1), 15–21. https://doi.org/10.3988/jcn.2012.8.1.15

Tarsy, D., & Baldessarini, R. J. (2006). Drug-induced extrapyramidal disorders. Drug Safety, 29(5), 379–392. https://doi.org/10.2165/00002018-200629050-00004

Cite this article: Arunkumar K, Gurumoorthy H. Haloperidol-Induced Extrapyramidal Symptoms in a Young Male with Alcohol Dependence Syndrome and Emotionally Unstable Personality Disorder. Indian J Pharmacy Practice. 2026;19(3):438-41.