



# A case of overdose of fluphenazine decanoate injection

## Abstract

**Case description:** A 28 years old, married Hindu male from a tea garden community, working as daily wage earner was diagnosed as a case of schizophrenia, paranoid type from psychiatry outpatient department (OPD) of Tezpur Medical College and Hospital (TMCH). He was prescribed with tablet risperidone 6 mg and tablet trihexyphenidyl 4 mg daily, and injection fluphenazine decanoate 25 mg intramuscularly (IM) every 30 days. He came for check-up after 27 days, and clinically and symptomatically he was found to be better. However, on enquiry it was found that by mistake he was given injection fluphenazine decanoate 25 mg on daily basis continuously for 27 days. But there were no signs of extrapyramidal symptoms (EPS) or any other side-effects. He was discharged with tablet trihexyphenidyl 4 mg and was asked to come after 15 days. But on follow up, it was reported that after a few days, the patient suffered from resting tremor of both upper and lower limbs. He was treated in a private hospital and the patient survived. **Conclusion:** Medical and paramedical staff should take care in prescribing and giving such depot injections.

**Keywords:** Drug overdose. Delayed-action preparations. Drug-induced dyskinesia.

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**Received:** 28 December 2021

**Revised:** 18 March 2023

**Accepted:** 19 March 2023

**Epub:** 29 March 2023

## INTRODUCTION

Fluphenazine decanoate is a typical antipsychotic available as delayed-action preparation used for the management of patients with schizophrenia.[1] It is used primarily as maintenance therapy for chronic schizophrenia and related psychotic disorders, particularly in patients where medication compliance is of great concern and who do not tolerate oral formulations.[1]

## CASE HISTORY

A 28 years old married, Hindu male from low socioeconomic status of tea garden community was diagnosed as a case of schizophrenia (F20 according to the tenth revision of the World Health Organization's International Statistical Classification of Diseases and Related Health Problems [ICD-10]),[2] paranoid type from psychiatry outpatient department (OPD) of Tezpur Medical College and Hospital (TMCH). He was prescribed with tablet risperidone 6 mg and tablet trihexyphenidyl 4 mg daily, and injection fluphenazine decanoate 25 mg intramuscularly (IM) every 30 days, and he was sent back home. He came for check-up after 27 days and was found to be better clinically and symptomatically. However, on enquiry it was found that by mistake he had been taking injection fluphenazine decanoate 25 mg on daily basis continuously for 27 days. But there were no signs of extrapyramidal symptoms (EPS) or any other side-effects as on that day. He was sent back home with tablet trihexyphenidyl 4 mg in divided doses and he was asked to come after 15 days. But the patient did not come for review. It was reported that the patient suffered from tremulousness of both upper and lower limbs after a few days of discharge from OPD followed by difficulty in walking, inability to take food, and excessive

sweating and salivation. He was admitted in a private hospital where he was diagnosed as a case of severe drug-induced EPS. His findings were as follows-

General examination: Pulse- 80 bpm; blood pressure (BP)- 120/80 mm Hg; respiratory rate (R/R)- 16/minute; temperature- 98°F.

Systemic examination: Central nervous system (CNS)- fine resting tremor, rigidity of bilateral (B/L) limbs, reflexes- B/L normal; chest- B/L clear; cardiovascular system (CVS)- Within normal limit (WNL); Per-abdomen- No abnormality detected (NAD).

The following investigations were done-

- Total leucocyte count (TLC)- 10200 cells/cmm; polymorphs- 79%, lymphocytes- 15%, monocytes- 5%, eosinophils- 1%, basophils-0%
- Fasting blood sugar (FBS)- 203 mg/dL, post-prandial BS (PPBS)- 202 mg/dl, glycosylated haemoglobin (Hb)- 7.1 U
- Non-contrast computed tomography (NCCT) scan of brain- normal; magnetic resonance imaging (MRI) brain- normal; electroencephalography (EEG)- normal background activity, ultrasonography (USG) whole abdomen (W/A)- normal.

The patient was treated with injection promethazine and tablet trihexyphenidyl. After 15 days, he recovered and was sent back home.

## DISCUSSION

The licensed maximum dose of fluphenazine decanoate depot injection is 100 mg every 14-35 days.[3] However, our index

patient received fluphenazine decanoate 25 mg IM daily continuously for 27 days instead of taking it on monthly basis. Here, the total accumulating dose of fluphenazine decanoate was 675 mg over 27 days. Though he developed EPS, but the patient recovered after prompt treatment.

In a case reported by Cheung and Yu,[4] a 24 years old patient of childhood psychosis, schizophreniform type who was receiving fluphenazine decanoate 50 mg IM four weekly, was erroneously given fluphenazine injection four hourly instead of four weekly during her hospital stay. This was discovered on sixth day after 21 injections (1050 mg) and she suffered from features of parkinsonism with salivation, rigidity, and slow gait. She was managed conservatively without any resuscitative measures and she recovered well. This is similar to our index case.

There is no such report, from India, reported after dosage as high as this index case, i.e., accumulating dose of 675 mg over 27 days, as searched from search engines like PubMed.[5]

### Conclusion

This is a rare case of overdose of fluphenazine decanoate injection which is usually given to schizophrenia patient with poor compliance of medications. But care should be taken to communicate to the patient in their own language about dose and the frequency of injection because usually it is not given daily as presumed by the patients. Feedback should be taken whether they have understood or not. Secondly, Paramedical stuffs and nurses should take proper precaution while going through prescription of such injections and give accordingly.

Thirdly, clinicians should verify the dose, frequency, and the mode of administration of such depot injection during each periodical check-up. Fourthly, diagnosis of any adverse effects like EPS should be made promptly and managed properly.

### Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given his/her consent for his/her images and other clinical information to be reported in the journal. The patient understands that his/her name and initials will not be published and due efforts will be made to conceal identity, but anonymity cannot be guaranteed.

### REFERENCES

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Saharia B, Ghosh S. A case of overdose of fluphenazine decanoate injection. *Open J Psychiatry Allied Sci*. 2023 Mar 29. Epub ahead of print.

Source of support: Nil. Declaration of interest: None.