Postinjection delirium/sedation syndrome with long-acting olanzapine pamoate in a middle-aged female

Sir,

Maintaining adherence in the treatment of schizophrenia is one of the greatest challenges. Olanzapine long-acting injection (LAI) is a new depot formulation consisting of olanzapine pamoate that is administered every 2–4 weeks. It has been found to be equally effective as an oral formulation in both acute episode and maintenance treatment.\textsuperscript{[1,2]} Few patients (<0.1%)
on olanzapine LAI develops postinjection delirium/sedation syndrome (PDSS) which is believed to be because of accidental intravascular injection or due to injury to the blood vessels, and then flow of the medication into the vasculature. Here, we present a case of a female patient who developed PDSS after she received fifth dose of IM olanzapine LAI.

A 29-year-old unmarried female presented with 8 years of continuous illness characterized by disorganized behavior, delusion of persecution and reference, auditory hallucinations, and social and occupational impairment. She was treated as an inpatient and started on oral olanzapine, but after 7 days, she absconded and discontinued medications which led to the initiation of olanzapine LAI in the next visit. Subsequently, the patient received four doses of olanzapine LAI. She was maintaining well without any complications on olanzapine LAI 405 mg, and this was her fifth monthly dose. Injection was given by a trained nurse with all the aseptic precautions and negative suctioning before administration. Within 10–15 min of administration of LAI, the patient developed tachycardia, restlessness followed by sedation. The patient showed agitation in between and she also appeared confused. After 20 min, she developed grunting; however, her blood pressure was maintained at 100/60 mmHg, and oxygen saturation was 98% at room air. A senior medicine consultant examined the patient for her tachycardia and agitation, and she was shifted to the emergency department and an urgent anesthesia consultation was made. Arterial blood gas analysis revealed mild respiratory alkalosis, so the patient was oxygenated continuously (5 L/min). IV fluid was started, the random blood sugar was 170 mg/dl and was put under the continuous cardiac monitor. Intermittent suctioning was done, and the patient was placed in left lateral position to avoid aspiration. The patient showed mild improvement in restlessness and confusional behavior by the evening and good improvement by next morning but was still drowsy. Vitals were stable throughout the period except for tachycardia. Based on the temporal association between olanzapine LAI and starting of agitation, sedation, confusional state, diagnosis of PDSS was suspected. The patient recovered completely in about 48 h.

Sedation has been associated with oral olanzapine more frequently during the initial 3 months of treatment, but PDSS is more specific to olanzapine LAI. The present case fulfills the proposed criteria for PDSS:

- Temporal association between onset of symptoms and dose of olanzapine LAI
- Symptoms characterized by sedation, confusion, and restlessness
- Absence of overdose of oral olanzapine
- Absence of other medical reasons for delirium.

Perhaps, few precautions such as supervising nursing staff while administering the LAI, taking care that the patient does not move his or her limbs before the injection needle is inserted till it is completely withdrawn may prevent vascular injury. Sensitizing the critical care team about such possible reaction and informing them before administering LAI so that they remain standby may prevent any loss of life. We would emphasize that it is important to remind family each time of the possibility of adverse events including PDSS before administering the LAI.

This report is intended to emphasize on knowledge, early diagnosis, and promptness in the treatment of PDSS with olanzapine LAI.

### Declaration of patient consent

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

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### Conflicts of interest

There are no conflicts of interest.

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Letters to Editor


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