Lorazepam challenge test: A unique clinical response in catatonia

ABSTRACT

Catatonia is a psychomotor behavioral syndrome characterized as a complex syndrome of bizarre motor behavior, impaired volition, and vegetative abnormalities. Catatonia is a medical emergency and if not recognized on time may have potentially fatal outcomes. We present a case series of three patients with catatonia, in whom Injection lorazepam 4 mg administered intravenously (Lorazepam Challenge) produced quick, optimum outcome.

Keywords: Bush Francis Catatonia Rating Scale, catatonia, clinical outcome, lorazepam challenge test

Karl Ludwig Kahlbaum first described catatonia as a “symptom complex.”[1] Patients with catatonia may be hypokinetic, stuporous, or hyperkinetic; common signs are mutism, posturing, negativism, staring, rigidity, and echo phenomena. Their behavior may also be stimulus bound in negativism, automatic obedience, waxy flexibility, mitgehen, gegenhalten, or withdrawal.[2] Catatonia carries a potential risk of patient morbidity and mortality unless treated in a timely manner.[3] For the treatment of catatonia lorazepam has a 70%–80% remission rate.[4] Most patients attain remission within 3–7 days of initiating lorazepam with doses from 8 to 24 mg lorazepam per day commonly used and well tolerated in catatonia patients.[5] We present three cases of catatonia and their unique clinical improvement after the lorazepam challenge test (LCT).

CASE REPORTS

Case 1

A 54-year-old male, a known case of schizophrenia for the past 30 years, currently on tablet clozapine 50 mg (1-0-1) was brought by family members with a history of abrupt onset of speaking very little, standing on single leg for 10–15 min, neglect of self-care, eating only when coaxed, and intermittent screaming with abusive words of 3-day duration. General and systemic examination was within normal limits. Mental status examination (MSE) revealed him to be having poor self-care, uncooperative, reduced motor activity, staring blankly, automatic obedience, posturing, mutism, and apathetic effect. His hematological and biochemical parameters including random blood sugar,
creatine kinase-myocardial band, creatine phosphokinase, and electrocardiography were within normal limits. Bush Francis Catatonia Rating Scale Score (BFCRS) was 18. He was given injection lorazepam 4 mg IV stat and repeated after 30 min. After 10 min of above, he got up from the bed and started walking. He asked for food and responded to the questions asked. BFCRS score was 3. After 30 min, there was complete remission of his catatonic symptoms. BFCRS score was 0. He was sent home with tablet lorazepam 2 mg four times daily (total 8 mg). On review, after 2 days, he was well oriented, eating well, interacting with others, and had no complaints of posturing or abusive behavior. There were no depressive cognitions or psychotic features.

Case 2
A 34-year-old male, a case of Schizophrenia since 2017, was on tablet olanzapine. He was admitted by colleagues with a history of not talking to anyone, urinates and defecates at inappropriate places, reduced self-care, and not taking food. MSE revealed poor self-care, not making eye contact, absent facial expressions, decreased psychomotor activity, following commands with increased reaction time, speech mute, with flat affect. BFCRS was 27. He was positive for immobility/stupor, mutism, staring, posturing/catalepsy, grimacing, and stereotypy. Relevant investigations were within normal limits. He was given injection lorazepam 4 mg IV, and a second dose was given after 10 min, again followed by 2 mg IV. He got up on his own, and after 2 min of latency, he ate the snack provided. However, he was mute, interacting briefly and was having rigidity. BFCRS Score was 4 after 30 min. He was continued on tablet lorazepam 10 mg/day and tablet amisulpride 300 mg/day. After one week, the patient was eating meals, made eye contact but was mute, interacting briefly with others, but had a flat nonreactive affect. Due to inadequate response, he was administered electroconvulsive therapy (ECT).

Case 3
A 21-year-old male, with no history of psychiatric illness, presented with two episodes of unresponsiveness, staring in space, spitting, hyperreligiosity, marked irritability, and not taking food. On examination, he was conscious, oriented to time, place, and person. Vitals were stable. The next day, he manifested with stupor, mutism, posturing, echolalia, and echopraxia. BFCRS was 32. Relevant laboratory investigations were within normal limits. He was administered injection lorazepam 4 mg IV followed by 30 min later 4 mg IV again followed by 2 mg IV. About 5 min later, he slowly got up and sat on his bed and said few words, but he was repeating whatever was said to him. BFCRS after 10 min was 10 and after 30 min was 6. He was continued on injection lorazepam 4 mg 8 hourly, tablet olanzapine, and tablet lithium was also added. Due to the persistence of symptoms, he was administered ECT.

**DISCUSSION**
In this series, we have presented three case reports, with patients presenting with features of hypokinetic catatonia. Lorazepam challenge was given with 4 mg intravenously and within 5 min more than 50% reduction in symptoms were seen and within 10 min 100% reduction in case report one and 67% reduction in case reports two and three. However, no significant difference other than withdrawal (refusal to eat, drink, and/or make eye contact) was found in LCT – 4 mg. “Lorazepam test” not only confirms the diagnosis of catatonia but that it also makes the underlying psychopathology apparent “by permitting mute patients to speak.” One participant who relapsed when lorazepam was being tapered off and another partially responded to the above described lorazepam trial, was given ECT for catatonia; results were satisfactory. Hence, ECT is the second-line treatment option.[b]  

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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