

Catatonia Following Obstetric Surgeries: A Case Series

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ABSTRACT

Background: Catatonia is a complex and easily misdiagnosed condition that if not detected timely, can be lethal despite having effective treatment. Catatonia may be viewed as a disorder of the basal ganglia–thalamocortical circuit. The purpose of our study is to focus on the fact that catatonia can be a common postoperative problem due to the stress factors of the surgery itself as well as the other associated social stresses related to pregnancy and childbirth.

Case description: We, hereby report a case series of three rare cases of postoperative catatonia who had the only similarity of being anxious for a male issue. All cases had an emergency cesarean section followed by which they developed symptoms of catatonia, were diagnosed by lorazepam challenge test, and had an excellent recovery with lorazepam. All possible differential diagnoses were ruled out.

Conclusion: Catatonia needs to be kept in mind as a possibility post-surgery especially by an obstetrician. An overall multidisciplinary approach to catatonia will help in improving effective maternal care.

Clinical significance: This case series emphasizes on the significance of early recognition, appropriate evaluation, and targeted management of postpartum psychiatric complications to ensure optimal maternal mental health outcomes.

Keywords: Anxiety, Case series, Pregnancy.

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INTRODUCTION

Catatonia is a syndrome involving varied presentations ranging from withdrawal and lack of movement or communication to extreme agitation, confusion, and restlessness. Previously, it was believed to be mostly associated with bipolar disorder, but with the advent of DSM-5, its association with various mental health disorders like schizophreniform and schizoaffective disorders, as well as substance abuse, has been established.¹ There is a theory that catatonia can precipitate from anxiety and extreme depression pertaining to any stress.² However, despite many factors, catatonia can also exist independently of any association.

Catatonia can manifest in three forms. The first type is akinetic catatonia, which is also the most common type. In this, the patient just stares and appears to be non-responsive to any form of stimuli like vocal or even noxious stimuli, but interestingly, awareness of the surroundings is present. Excited catatonia is the second type in which the patient is impulsive and shows pointless movements. It can be accompanied by agitation and delirium. Overactivity of the patient can, therefore, be harmful for the patient as well as for the others. The last and most dangerous type is malignant catatonia that manifests as autonomic instability. It can deteriorate with extreme rapidity and can prove fatal.³ The Bush Francis Catatonia Rating Scale (BFCRS) is used to diagnose catatonia as well as to quantify its degree by scoring criteria. Treatment modalities include pharmacotherapy and electroconvulsive treatment. Prompt treatment in the early phases of catatonic state is crucial. Very few cases of postoperative catatonia have been reported so far. Hence, the purpose of our study is to highlight the need of an early diagnosis and treatment of catatonia by clinicians of all branches. Being a psychiatric disorder and a rare diagnosis, catatonia is often not kept as a differential in postoperative patients. This case series will help an obstetrician in widening the spectrum of differential diagnosis in postoperative psychiatric conditions.

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CASE DESCRIPTION

Case 1

A 32-year-old woman G4 P3 L2 with previous lower section cesarean section (LSCS) presented to our casualty at a period of gestation 29 weeks and 3 days with chief complaints of on and off spotting per vaginam for 15 days followed by heavy bleeding per vaginam for 1 day. The bleeding was sudden in onset and painless. There was no history of trauma, no elevated blood pressure reading, and swelling over the extremities. On examination, her vitals were stable and there was no tenderness over the abdomen or previous scar. Her routine laboratory investigations were normal. On her ultrasound she was diagnosed with complete placenta previa for which emergency LSCS was done. Intraoperatively, a decision for obstetric hysterectomy was made due to uncontrolled postpartum hemorrhage. A stillborn female fetus was delivered. Rest of the surgery was uneventful. She was shifted to intensive care unit (ICU) postoperatively and her vitals were stable. On postoperative

day 2, the patient was apathetic, giving single word responses to our queries. She also did not interact with her attendants. She also refused to eat or drink anything. She would tend to lie in bed the day, sitting up only when made to do so. We found waxy flexibility during examination. Routine blood investigations including complete blood count, serum electrolytes, and renal and liver function tests were normal. No abnormality was detected on neurological evaluation. Psychiatry consultation was sent on the next day and 2 mg lorazepam was given intravenously as a challenge. Within a few hours she accepted food and water. She identified her relatives and started talking with them. She also started showing emotions and talked graciously to the staff. Lorazepam was continued per oral. There was gradual improvement in her behavior. Lorazepam was tapered gradually, and the patient was discharged after 10 days in an improved condition. Although no organic cause could be elicited just prior to her discharge, an interview revealed that she desired a male baby and was stressed about the prospect of being unable to bear a male baby in future. On further interviews, her husband revealed that she previously used to have episodes in which she would stop talking to him and her relatives, all of a sudden. He had attributed it to her anxious and irritable nature.

Case 2

A 30-year-old woman G6 P4 L3 A1 at a period of gestation 33 weeks and 1 day presented to our casualty with impending eclampsia with severe anemia with pulmonary edema. She had received a loading dose of magnesium sulfate ($MgSO_4$) and was referred to our hospital in view of uncontrolled hypertension. She was taken up for emergency cesarean section. A female baby of 1.6 kg was delivered who died 2 hours after birth.

The surgery and immediate postsurgical period were uneventful. She too was shifted to ICU postoperatively for observation and was clinically stable. On postoperative day 2, she developed apathy and fixed gaze and refused to interact. Catalepsy and echopraxia were noted on examination. Her metabolic and neurological investigations were normal. On postoperative day 3, she was given a lorazepam challenge with a 2 mg intravenous dose following which there was a rapid improvement in her symptoms. Like our previous case, she was discharged on day 10 in a completely recovered state after being treated with a tapering dose of lorazepam. This case had similarity to the first case in having the same stress of anticipating a male baby as she had three previous female babies.

Case 3

A 32-year-old woman G2 P1 L1 at a period of gestation 37 weeks and 3 days unbooked case presented to our Outpatient Department with a complaint of decreased fetal movement and leaking per vaginam for 2 days. Her Non-stress Test (NST) was non-reactive and the biophysical score on ultrasonography was 4/8 with amniotic fluid index (AFI) of 2 cm. On per speculum examination, frank leak was observed. Per vaginal examination revealed that the cervical os was closed and uneffaced. Based on the poor Bishop score, prolonged leaking, and non-reactive NST with reduced AFI, a decision for emergency cesarean section was taken. Her routine antenatal investigations were normal. She appeared quite anxious prior to her surgery. She delivered a female baby of 3.1 kg. Rest of the intraoperative and postoperative period was uneventful. On postoperative day 2, she developed irritability. On trying to interact with the patient, echolalia and echopraxia was observed. Later, her irritability increased for which psychiatry opinion was taken.

There was no prior history of any altered behavior in the patient except for a few occasions of excessive anxiousness in less stressful situations. Similar to our previous cases, a thorough metabolic and neurological evaluation was done to rule out any organic cause. After excluding all other possible causes, a lorazepam challenge test was done to which the patient responded dramatically. She was discharged in a stable state on tapering lorazepam and her routine follow-ups were uneventful.

DISCUSSION

Catatonia requires multispeciality attention and awareness. Clinically, other associated medical conditions can mask catatonia, thus delaying its treatment.

This underrecognition has been addressed by the updates made in DSM-5, but still, more efforts must be made to not miss such an important syndrome. Our study focuses on creating more awareness among healthcare professionals to consider it as a part of the common differential diagnosis while treating patients if they present with any form of altered behavior.

"The BFCRS has a total of 23 items that are tallied to give an overall score. The diagnostic criteria for catatonia in the current DSM-5 require three or more of the following symptoms irrespective of the time limit: stupor, waxy flexibility, catalepsy, mutism, posturing, negativism, stereotypes, mannerisms, grimacing, agitation, echopraxia, and echolalia." For ICD 10, only one criterion lasting for 2 weeks is sufficient for the diagnosis.⁴

To equally represent the varied signs of catatonia and to differentiate its subtypes, a rating scale has been developed which scores each item on a 0–3 scale. This helps in quantifying the symptoms based on severity.⁵

Diagnosis and scoring are always followed by treatment. Benzodiazepines have been considered the first line and the best followed by electroconvulsive therapy, but no large-scale study has yet been done to compare their exact efficacy. Some novel modalities include magnetic seizure therapy and focal electrically administered seizure therapy.⁶

One interesting study was conducted by Jason R Tatreau et al. in 2018, in which two cases of post-liver transplantation catatonia were diagnosed by clinical suspicion and confirmed by lorazepam trial like our case. The cases had a full recovery with tapering lorazepam dose. They concluded that increased awareness and understanding of catatonia in the early post-transplantation period may shorten the length of hospital stay and decrease mortality, and an early involvement of consult-liaison psychiatry will prove highly beneficial.⁷

David O' Regan et al. studied a woman postoperatively after anterior resection of the sigmoid colon in the year 2010 in which she was diagnosed with catatonia and diagnosed with risperidone challenge. They concluded that it was a reactive response to several psychological stress, surgery being one of the factors, and a diagnosis of catatonia should be considered in critically ill patients with unexplained motor, behavioral, and/or psychotic symptoms.⁸

A similar study by Gregory D Brown et al. in 2016, found catatonia post-liver transplantation in a patient with liver cirrhosis and postulated that catatonia remains an underrecognized neuropsychiatric complication in postoperative cases.⁹

A case series reported by Doran and Sheehan elaborating three cases supported the fact that any acute medical deterioration in a patient can precipitate catatonia, more so in patients having history of mental illness. They have brilliantly brought out the fact

that patients at risk are mostly admitted under specialities other than psychiatry and hence, there is a need to increase awareness among all specialities.¹⁰

Hence, an awareness of all medical specialities is essential to diagnose and treat catatonia in the early stage as is depicted in our case series where the patients were managed appropriately with a multidisciplinary coordinated approach that helped in their recovery. This also justifies the fact that anxiety and fear can be part of the causes of catatonia as is seen in our cases, the factors being surgery, and the desire to have a male child. It also throws light on the fact that it is possible that catatonia can develop in a previously anxious patient under stressful circumstances like surgery. Psychological stressors, such as gender preferences in offspring, can contribute to the manifestation of psychogenic symptoms in obstetric patients. Awareness of and addressing these stressors and mental health needs is crucial in comprehensive care.

CONCLUSION

Catatonia has so far been one of the least reported complications in the postoperative period. Therefore, this unusual case exemplifies a common problem usually overlooked by clinicians. The purpose of our study is to increase awareness of this condition among doctors as catatonia, though easily treatable, can rapidly progress to morbid and fatal outcomes, if overlooked. Such studies are of major importance in developing countries like India where women face many psychological and social stress specially during pregnancy and if diagnosed timely, can be saved from further deterioration of their mental and physical health.

Clinical Significance

This case series highlights three cases of postpartum psychiatric complications in women who underwent emergency cesarean sections. Though each case presented with different symptoms, their clinical course and consequent recovery after a prompt

treatment, underscores the need for comprehensive psychiatric assessments, including exploring the patient's emotional well-being and potential underlying psychological factors.

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