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Catatonia in a 39-Year-Old Patient after Post-hysterectomy and Post-salpingo-oopherectomy

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Case Report

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Abstract

Catatonia is a severe psychomotor syndrome which, if undiagnosed can be life threatening in its malignant form. Management includes exclusion of metabolic, infectious and neurologic causes. Appropriate psychiatric consultation is indicated following exclusion of organic causes. We report an unusual case of catatonia in a patient with no history of significant comorbidities, who exhibited unresponsive to verbal and painful stimuli in post-anesthesia-care unit following laparoscopic hysterectomy. Following exclusion of metabolic, neurologic and infectious causes, a psychiatric consultation was obtained for her continued altered mental status and unresponsiveness to physical stimuli. Based on her presenting signs and symptoms and dramatic improvement in her mental and physical status with a trial of lorazepam, a confirmed diagnosis of catatonia was made. On postoperative day 3, patient was discharged home with readjustment of her anti-depression medications doses and on lorazepam, to be tapered off over the course of 8 days. At the time of her discharge from ICU, patient had recovered completely. To our knowledge, this is the first reported case of catatonia in a post-hysterectomy patient with no prior history of psychosis or significant comorbidities.

Keywords: Post-hysterectomy; Lorazepam; Chronic anemia; Hypothyroidism; Anxiety disorders

Introduction

Catatonia is a psychomotor syndrome characterized by either inappropriate responsiveness or unresponsiveness to verbal or physical stimuli in and a wake patient. Numerous clinical conditions can mimic catatonia and differential diagnosis of catatonia is broad. Early diagnosis and appropriate treatment plan is crucial because several clinical conditions, such as malignant catatonia, neuroleptic malignant syndrome, non-convulsive status epilepticus, catatonic post-operative delirium, residual neuromuscular block, all with life-threatening consequences, can present with overlapping symptoms and signs [1]. Most of the catatonic cases are reported in patients with acute or chronic psychiatric illness [2]. We report an unusual case of catatonia in a post-hysterectomy patient with no prior history of psychosis, catatonia, alcoholism or benzodiazepine

dependence or presence of significant comorbidities. A multi-disciplinary and coordinated in-time management approach and follow up by appropriate consults lead to an early diagnosis and successful treatment of this patient.

Case Presentation

A 39-yr-old, 54-kg, female with a history of significant abnormal uterine bleeding and presumptive diagnosis of adeno-myosis was scheduled for laparoscopic vaginal hysterectomy and bilateral salpingo-oopherectomy. Her medical history was significant for chronic anemia, hypothyroidism, migraine, asthma, depression and anxiety disorders. Her list of home medications for the last several years and at the time of pre-surgical evaluation were as follows: acetaminophen 325 mg as needed; Cholecalciferol vitamin D3 10,000 units CAP once a day; ferrous gluconate 324 mg once a day for chronic anemia; advil/motrin 300 mg every 8 h for pain associated with adeno-myosis; levothyroxine 137 mcg once a day for hypothyroidism; ropinirole (requip) 0.25 mg three times a day for restless leg syndrome; sertraline (Zoloft) 60 mg daily for depression and anxiety; medroxy-progesterone (depoprovera) 150mg/mL intramuscular every three months; sumatriptan (imitrex) 25 mg by mouth once a day for her migraine headache. At the time of her evaluation in the preoperative clinic, she was free of any symptoms and signs except for ongoing uterine bleed and associated pain. Her past surgical history included tubal ligation under general anesthesia several years ago without any clinical squeal. Basic laboratory studies prior to her surgery included basic metabolic panel; a complete blood count and urinary analysis. Her blood work up indicated low hemoglobin of 9.6 mg/dL. A previous work up for low hemoglobin level had indicated iron deficiency anemia. Her TSH level was marginally elevated. An electrocardiogram showed normal sinus rhythm. Preoperative vital signs showed blood pressure of 115/75, pulse of 81 beats/min, respiratory rate of 16 breaths/min, temperature of 36.3^{0}C and room air oxygen saturation of100% per finger pulse oximetry. Preoperatively, patient showed mobile affect and started sobbing as she was taken to the operating room due to apprehension of the surgical procedure.

Monitors included standard monitors. Pre-induction, patient received 2mg of midazolam and 50mcg of fentanyl intravenously. Anesthesia was induced using propofol, lidocaine, fentanyl and rocuronium and was maintained with sevoflurane and low dose infusion of propofol and phenylephrine. Patient remained hemodynamically stable during the whole course of surgical procedure that lasted for 2.5 hours. Estimated blood loss was 50mL. Patient received 1300 mL of crystalloid over the course of whole procedure. She received 150mcg of fentanyl, 0.8 mg of hydromorphone and 30 mg of toradol intramuscularly for her pain control. At the conclusion of her surgery the patient was extubated without any issues and transferred to the recovery with stable vital signs. After an hour, the recovery nurse caring for the patient called in the anesthesiologist to assess the patient. On physical examination patient appeared upset, tearful, and verbally unresponsive. She responded to painful stimuli by nodding her head. She exhibited a blank stare to command stimuli. Her pupils were small and equal and reactive to light, breathing was unlabored and heart rate was 110 beats per min. Her reflexes were all normal. She was normotensive but somnolent. Basic electrolytes, ABG, UA were all within normal limits with the exception of hemoglobin 8.1 mg/dL. Three hours later patient continued to remain somnolent and exhibited catatonic state with a non-focal physical examination. A decision was made to transfer the patient to ICU for monitoring and neurology consultation.

Helical CT imaging of the brain without contrast showed no evidence of intracranial abnormality which ruled out structural causes of her catatonic state. Neurology evaluation was all within normal limit and indicated unlikely explainable cause of her behavior and catatonic state. A psychiatric consult was requested. During the initial psychiatric evaluation patient remained minimally responsive. Patient exhibited waxy flexibility, with limbs essentially loose and with some ability to resist against gravity. Her reflexes were brisk done with visual examination. At this time (post-op day 2) patient was given 2mg lorazepam intravenously. Over the course of next 10 minutes her observed affect improved and she was able to move a bit more and made an effort to speak. Patient met screening Bush-Francis criteria for "catatonia.[5]" The etiology of her catatonia was unclear. Patient was placed on scheduled dose of lorazepam, 2mg every four hours. On post-op day 3 there was a dramatic improvement in her mental state. Physical examination showed a cooperative disheveled alert patient with good eye contact and often looking at nurses to understand interviewer questions. She showed no evidence of Delusion ideation or visual hallucination. She denied any suicidal or homicidal ideation. Patient had no recall of her catatonic state and denied any memory of catatonic state. She was discharged home on post-op day 3 with readjustment of sertraline dose and start of 7.5mg of mirtazapine per day for her depression. Lorazepam was tapered off over the course of 8 days. Patient was asked to follow up in the psychiatric outpatient clinic.

Discussion

Catatonia is a psychomotor behavioral syndrome. The syndrome is marked by a variety of symptoms and signs. There are wide variations in the reported incidence and prevalence of catatonia as there is no clear-cut association between prevailing medical conditions and catatonia. However, most of the reported cases describe higher incidence among patients suffering from psychosis, schizophrenia or severe bipolar affective disorders. Benegal, et al. [3] studied 65 patients with catatonic syndrome admitted to an inpatient facility and sought an association between catatonia and other psychiatric disorders. Of the 65 patients followed, 54% had history of bipolar disorder or schizophrenia while 46% had no specific underlying etiology. Multiple clinical conditions such as endocrine and electrolyte abnormalities, viral and bacterial infections, drugs withdrawal, acute and chronic brain lesions, trauma, postoperative delirium, all can present with catatonia [4]. However, the core features of catatonia are the same, regardless of the precipitating medical condition. Catatonia may be classified as retarded or excited, based on presenting symptoms and sign. The core feature and characteristics signs are stupor, mutism, verbal or physical unresponsiveness, posturing, catalepsy in the catatonic type while negativism, excitement in the excited form. There may be overlap in the symptoms of two forms of catatonia. The Bush-Francis catatonia rating scale [5] is a validated rating scale and is used very often clinically. The characteristics symptoms and signs and its diagnosis are reviewed in detail by Caroff [6]. Since the differential diagnosis of catatonia is broad and several life-threatening conditions can mimic catatonia, treatable medical conditions such as malignant neuroleptic syndrome (NMS), encephalitis, non-convulsive status epilepticus, severe metabolic disorders, cardio-embolic stroke, residual neuromuscular block, catatonic postoperative delirium must be recognized and treated first. Many of these conditions can be ruled out by careful selection of laboratory tests such as comprehensive metabolic panels and serum creatine-kinase measurements to rule out NMS; or MRI or CT to rule out brain mass lesions; or EEG to rule out non-convulsive seizure disorder. In the absence of life-threatening or serious medical condition(s) consultation with a neurologist and a psychiatrist is indicated. The prognosis in catatonia is variable and at least depends upon the nature and severity of the disease. For example, catatonia due to metabolic causes or catatonia occurring in affective disorders has better prognosis as compared to catatonia occurring in schizophrenic patients. In terms of treatment, benzodiazepine and electroconvulsive therapy (ECT) are the first line treatment therapy. Among the benzodiazepine, lorazepam is used most often. Sixty to eighty percent of patients respond well to lorazepam or ECT alone or in combination or in-sequence treatments [7]. In our patient the diagnosis of catatonia was the diagnosis of exclusion where we excluded possible medical and neurological causes by extensive work up of her presenting clinical symptoms. The interesting part of her clinical presentations was her more favorable response to lorazepam rather than midazolam. How lorazepam acts in these patients is completely unknown. Since antipsychotic medications, anti-dopaminergic drugs can confuse the differential diagnosis or can worsen or precipitate catatonia, there use in catatonic patients be avoided [1]. Finally, although catatonia can occur in patients with history of psychosis, schizophrenia, severe manic depression, metabolic or neurologic disorders, there are very few reported cases in post-surgical patients [8-15]. Our case is unique in several ways. First, it shows catatonia can occur in post-surgical patients with no prior history of psychosis or presence of significant comorbidities. It should always be kept in mind as part of differential diagnosis in an unresponsive awake post-surgical patient because significant delays in diagnosis or inappropriate use of medications can lead to mismanagement of these patients. Second, our case demonstrates; how a multidisciplinary in time approach to obtaining appropriate consults can lead to precise diagnosis, management and treatment plans with good outcome. Finally, this is the first reported case of catatonia in a laparoscopic ally assisted post-hysterectomy patient.

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