Case Report

A case report of menstrual catatonia causing delayed emergence from anaesthesia: a diagnostic dilemma

Abstract

Delayed emergence from anaesthesia is attributed to residual effects of anaesthetic or analgesic medications. Menstrual catatonia is an extremely rare cause for delayed emergence from anaesthesia which may pose diagnostic dilemmas. The diagnosis is by history and clinical examination. Neuro–imaging may be required to rule out organic causes if the patient stays in catatonic state for a prolonged period. A 24year-old female underwent microdochotomy of left breast under general anaesthesia. Her trachea was extubated in the operating room with satisfactory respiratory parameters even though she remained sedated and not obeying commands. She remained in catatonic state in the postoperative care unit leading to diagnostic dilemmas. Ninety minutes later, she regained consciousness abruptly and started obeying commands. Her past history revealed two similar episodes associated with menstrual period.

Keywords: catatonia, menstrual cycle, delayed emergence from anesthesia

Volume 10 Issue 5 - 2018

Harihar V Hegde,[1] Vijaya Kumar[2]
Department of Anaesthesiology, SDM College of Medical Sciences and Hospital, India

Correspondence: Harihar V Hegde, Department of Anaesthesiology, SDM College of Medical Sciences and Hospital, India, Tel 91836 2477755, Fax +91836-2461651, Email drharryhegde@yahoo.co.in

Received: May 29, 2018 | **Published:** September 04, 2018

Introduction

Delayed emergence from anaesthesia is attributed to residual effects of anaesthetic or analgesic medications.[1] Common and generally obvious causes for delayed emergence are hypothermia, prolonged surgery, overdose of anaesthetic agents, opioids, incomplete recovery from neuromuscular blocking agents, etc.[2] Rarely, delayed emergence can be secondary to unusual causes and present diagnostic dilemmas. Most of the published literature on delayed emergence from anaesthesia is in the form of case reports and case series. Such low occurrence impedes the learning from personal experience. Menstrual catatonia itself is a very rare condition[3] and to encounter this in perioperative scenario is extremely rare. To our knowledge, there are no reports of menstrual catatonia in the perioperative period. We present a case of menstrual catatonia causing delayed emergence from anaesthesia.

Case report

A 24year-old female (weight=45kg) underwent microdochotomy for duct papilloma of left breast under general anaesthesia. She received intravenous glycopyrrolate 0.2mg, fentanyl 100µg, propofol 100mg, vecuronium 5mg during induction of anaesthesia. Endotracheal intubation was performed and anaesthesia was maintained with isoflurane (end-tidal concentration 0.8–1%) and nitrous oxide in oxygen 30%. Vital parameters remained stable intraoperatively. She received 1L of normal saline, and intravenous paracetamol 600 mg towards the end of the procedure for postoperative analgesia. Her last recorded intraoperative nasopharyngeal temperature was 36.8°C. After reversal of neuromuscular blockade with neostigmine 2.5mg + glycopyrrolate 0.5mg, trachea was extubated in the operating room with satisfactory respiratory parameters even though she remained sedated and not obeying commands. The total duration of anaesthesia was 1h. Five minutes after extubation, she had rigors (about 5 bouts) 2 to 3min apart without horripilation.

She was shifted to the postoperative care unit expecting her consciousness level to improve. In the postoperative care unit, she remained drowsy, absolutely not responding to even painful stimulus (not even a change in the respiratory pattern). Rate and depth of respiration were normal. She had intact cough reflex to airway stimulation. There was no hypertonia in the extremities during passive limb movement. Her random blood sugar level at that time was 160mg/dl. Pupils were bilaterally equal in size and reactive to light even though she was resisting eyelid elevation, and blinking in response to visual threat. We made the diagnosis of catatonic state based on the clinical features. A psychiatry consultation was obtained subsequently as she did not recover even after 30min and the Psychiatrist concurred with our diagnosis. One and a half hour later when an emergency computed tomography was being contemplated, she regained consciousness abruptly and started obeying commands. Her subsequent postoperative period was uneventful.

When an inquiry about the past history was made the next day, she revealed that she had an episode of unconsciousness lasting for about an hour ten years ago during her menstrual period and she was hospitalised then. Ten days before the surgery, she had a similar episode of unconsciousness associated with intermittent rigors on the first day of her menstrual period. Her mother also had similar problems (3–4 such episodes) during her young age although not related to menstrual periods. Written consent to publish the report was obtained from the patient.

Discussion

Catatonia is a psychomotor phenomenon that may be primarily psychiatric or secondary to a general medical condition.[4] Catatonia covers a broad group of movement disorders sometimes seen in psychotic illness. It presents with stupor, excitement, or alternating stupor and excitement. Any two of the following signs manifest catatonia: motor immobility, excessive motor activity, negativism or mutism, peculiarities of voluntary movements, echolalia, or echopraxia.[3,5] Other conditions associated could be neurologic illness, metabolic disorders or as a side effect of certain medications. There are a very few reports of catatonia in the postoperative period.[6–8] There is a report of

epidural injection of morphine causing postoperative catatonia leading to jaw dislocation.[8] Apart from being postoperative, these cases share no other similarities with our patient.

Since our patient remained absolutely unresponsive to painful stimulus, we considered hypothermia, opioid overdose, seizures, stroke and hypoglycaemia in the differential diagnosis. Hypothermia was not a possibility as normothermia was maintained intraoperatively. The fentanyl dose used was considered appropriate for her body weight (≃2µg/kg). Possibilities of seizure activity and acute cerebrovascular accidents were ruled out by clinical features. Hypoglycaemia was ruled out by the measured blood sugar level. We did not consider major electrolyte abnormalities as she underwent a minor procedure of short duration without a large quantity of intravenous fluid administration and major fluid shift. Evaluation with Entropy to know the level of consciousness was considered, but the facility was not available in the postoperative area. We did not subject her for any further evaluation by neuro–imaging as she made a rapid recovery and there was no recurrence of catatonia. As the diagnosis of catatonia is clinical, we acknowledge that our diagnosis is speculative in the absence of any other evidence. However, we have ruled out any organic causes with reasonable certainty.

Menstrual catatonia is a syndrome in which patients show psychotic symptoms associated with the menstrual cycle, is variously known as periodic psychosis of puberty or of adolescence (PPP/A)[9] or menstrual psychosis which includes patients in a wider age range. Menstrual psychosis rarely presents with catatonia. In a global investigation of 80patients with menstrual psychosis, only three patients had presented with catatonia as a salient symptom. In the reported case of menstrual catatonia,[3] her catatonic state began approximately 7days prior to menstruation and discontinued approximately 10days after the end of menstruation. Antipsychotic drugs like haloperidol, lithium carbonate,[3] risperidone[7] have been used in treating this condition.

Conclusion

Menstrual catatonia is a very rare cause for delayed emergence from anaesthesia and this may pose diagnostic dilemmas. The diagnosis is by history and clinical examination. Neuro–imaging may be required to rule out organic causes if the patient stays in catatonic state for a prolonged period.

Acknowledgements

None.

Conflict of interest

The authors declared that there is no conflict of interest.

References

1. Tzabazis A, Miller C, Dobrow MF, et al. Delayed emergence after anesthesia. *J Clin Anesth.* 2015;27(4):353–360.
2. Misal US, Joshi SA, Shaikh MM. Delayed recovery from anesthesia: A postgraduate educational review. *Anesth Essays Res.* 2016; 10(2):164–172.
3. Kobayashi T, Kato S. Menstrual catatonia. *Psychiatry Clin Neurosci.* 2009;6396):773–774.
4. Weder ND, Muralee S, Penland H, et al. Catatonia: a review. *Ann Clin Psychiatry.* 2008;20(2):97–107.
5. Ilbeigi MS, Davidson ML, Yarmush JM. An unexpected arousal effect of etomidate in a patient on high-dose steroids. *Anesthesiology.* 1998;89:1587–1589.
6. Cottencin O, Debien C, Vaiva G, et al. Catatonia and Liver Transplant. *Psychosomatics.* 2002;43(4):338-339.
7. O Regan D, Wong K, Bouras I, et al. Falling in and out of consciousness: catatonia in a postoperative patient. *J R Soc Med.* 2010;103(3):107–108.
8. Parida S, Allampalli VD, Krishnappa S. Catatonia and jaw dislocation in the postoperative period with epidural morphine. *Indian J Anaesth.* 2011;55(2):184–186.
9. Abe K, Ohta M. Periodic psychosis of puberty: A review on near-monthly episodes. *Psychopathology.* 1992;25:218–228.