

CATATONIA OR LOCAL ANESTHETIC CNS TOXICITY: A CASE REPORT

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Introduction

Myasthenia Gravis (MG) is an autoimmune disorder that weakens skeletal muscles, affecting key areas such as respiratory, ocular, bulbar, and limb muscles.

Challenges arise in anesthetic management, especially in terms of assessing respiratory function and bulbar symptoms during preoperative evaluation.

Regional anesthesia is commonly preferred due to concerns about neuromuscular blockade and muscle depression

Case presentation

Patient Information:

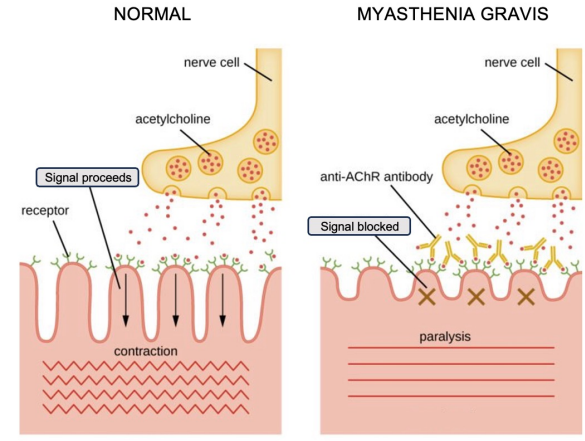
- 78-year-old woman with stable MG for 30 years on pyridostigmine.
- Elective total shoulder arthroplasty under general anesthesia and regional block
- Preoperative evaluation without respiratory issues or history of myasthenic crisis but revealed that last dose of pyridostigmine had been missed.

Anesthetic Plan:

- General anesthesia with propofol, ketamine, sevoflurane, and remifentanyl infusion.
- Superior trunk nerve block catheter inserted preoperatively (dry catheter)
- No neuromuscular blockers or long-acting opioids were used.

Postoperative Course:

- Few minutes after local anesthetic bolus (5 ml of 0.5% bupivacaine) presented with catatonic symptoms: awake but unresponsive, no facial or extremity movement, unable to follow commands.
- Hemodynamically stable, with normal blood tests (ABG, glucose, electrolytes).
- 30 minutes after symptoms onset, patient returned to baseline mental status
- No obvious signs of seizure activity, and subsequent EEG monitoring negative



• While myasthenic crisis is a key concern in the unresponsive MG patient, other causes like catatonia or local anesthetic toxicity should also be considered.

• The complexity of MG patients requires thorough evaluation, close monitoring, and timely postoperative assessment to prevent complications



SCAN ME!

Discussion

Triggers for Myasthenic Crisis:

- Known triggers include infections, pharmacological noncompliance, and surgical stress.
- Patient's missed dose of pyridostigmine might have triggered symptoms.
- Her brief unresponsiveness was not followed by further weakness, and she recovered spontaneously after 30 minutes.

Catatonia and MG:

- Previous studies suggest a link between autoimmune disorders and catatonia, particularly in patients with comorbidities like dementia or depression.

Local Anesthetic CNS Toxicity:

- Accidental vascular injection may cause CNS toxicity, leading to symptoms like the ones observed in this patient.

Potential causes of patient's presentation

Myasthenic crisis
Local anesthetic CNS toxicity
Catatonia
Seizure
Medication adverse effect
Postoperative cognitive dysfunction
Sleep paralysis
Cerebral amyloid angiopathy / Lewy body spells
Cerebral air embolism

References

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