

Unrecognized Myasthenia Gravis Presenting as Prolonged Neuromuscular Blockade: A Case Report

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ABSTRACT

Background: Undiagnosed neuromuscular disease can present unexpectedly during anesthesia. We report prolonged neuromuscular blockade revealing previously unrecognized myasthenia gravis.

Methods: A 43-year-old woman underwent elective laparoscopic cholecystectomy. Standard-dose rocuronium was administered.

Results: Recovery of neuromuscular function was markedly delayed despite reversal. Postoperative work-up demonstrated positive acetylcholine receptor antibodies and a decremental response on repetitive nerve stimulation, confirming myasthenia gravis.

Conclusions: Anesthesiologists should consider occult neuromuscular disease when recovery from non-depolarizing agents is unexpectedly prolonged. Quantitative neuromuscular monitoring is essential.

KEYWORDS

myasthenia gravis; neuromuscular blockade; rocuronium; sugammadex; postoperative respiratory failure

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INTRODUCTION

Myasthenia gravis (MG) is an autoimmune disorder of the neuromuscular junction. Patients with subclinical disease may first manifest during exposure to non-depolarizing neuromuscular blocking agents, to which they show heightened sensitivity. Subclinical MG may remain silent until the neuromuscular junction is stressed pharmacologically. Because the safety margin of neuromuscular transmission is reduced, affected patients exhibit marked sensitivity to non-depolarizing agents and relative resistance to succinylcholine. Recognizing this pattern intraoperatively can be the first clue to an undiagnosed disorder.

METHODS

We describe the perioperative course, monitoring and diagnostic evaluation of a patient with unexpectedly prolonged blockade.

RESULTS

After 0.6 mg/kg rocuronium, train-of-four monitoring showed no recovery at the expected interval. Sugammadex was administered with partial improvement. The patient required brief postoperative ventilatory support and made a full recovery. Serologic and electrophysiologic testing confirmed MG.

DISCUSSION

This case underscores the value of quantitative (objective) neuromuscular monitoring, which detects residual blockade that clinical assessment may miss. Early recognition prevents postoperative respiratory complications. Sugammadex has transformed the management of unexpected rocuronium-induced blockade, but adequate dosing depends on objective quantification of the depth of block. In suspected MG, a conservative approach with reduced initial relaxant dose and titration to effect is advisable. Postoperative monitoring in a high-dependency setting is prudent until full neuromuscular recovery is confirmed.

CONCLUSION

Prolonged recovery from neuromuscular blockade warrants investigation for neuromuscular disease and mandates objective monitoring.

Figure 1. Train-of-four neuromuscular monitoring

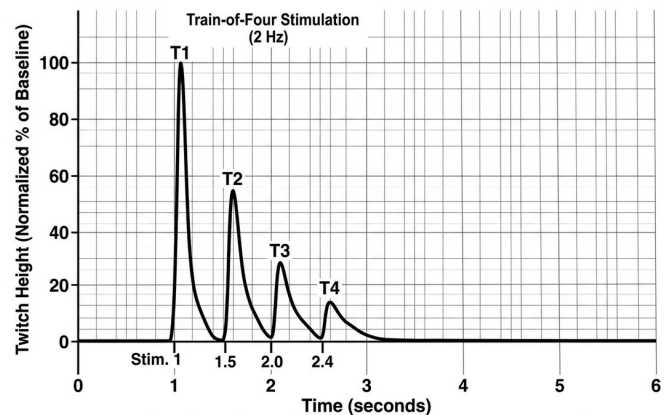


Figure 1: Neuromuscular Monitoring Graph showing TOF Fade

Acceleromyographic train-of-four tracing demonstrating progressive fade of the four evoked responses, consistent with a non-depolarizing block of exaggerated duration.

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