

Undiagnosed Myasthenia Gravis Complicating Operative Course of Patient Posted for Diagnostic Laryngoscopy and Biopsy

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ABSTRACT

Introduction: Myasthenia gravis is a chronic autoimmune neuromuscular disease characterised by varying degree of muscle weakness. Undiagnosed myasthenia gravis owing to very unusual presentation in perioperative period leading to significant complications.

Case report: A case report of undiagnosed myasthenia gravis patient presented for direct laryngoscopy and biopsy, with complaint of dysphagia and jaw pain.

Conclusion: Myasthenia gravis is an autoimmune disease and may be detected accidentally. And care should be paid to possible complications because of neuromuscular blocking agents.

Keyword: Myasthenia Gravis, Suggamadex, Respiratory Failure

INTRODUCTION

Myasthenia gravis is a rare autoimmune disorder caused by a decrease in functional acetylcholine receptors at neuromuscular junction resulting from inactivation by circulating antibodies.¹ It is more common in women in younger patients and in male older patients with estimated prevalence of 1 in 20000.² Muscles involved in the sequence – ocular, facial, pharyngeal, laryngeal and neck muscles.² We hereby reporting a case of undiagnosed myasthenia gravis posted for direct laryngoscopy and biopsy.

CASE REPORT

A 51 year old male patient, presented to the outpatient clinic with difficulty in swallowing and jaw pain since 3 months. The patient had no significant past medical history, took no regular medications and no surgical history in past. Patient was chronic smoker and tobacco chewer for 30 years. Preoperative investigations were normal. On systemic examination of chest, equal air entry present on both sides of lung and patient had right sided basal crepts on auscultation. Written informed consent taken from patient. Preoperatively, monitors were attached, IV access obtained and inj. Glycopyrrolate 0.2 mg with inj. ondansetron 4 mg IV was given. With routine monitoring, patient induced with inj. Propofol 150 mg IV, inj succinylcholine 100 mg IV and intubated with endotracheal tube of 7 number. Maintenance of anaesthesia done with isoflurane 1%, nitrous oxide 50% in oxygen. Lungs were artificially ventilated on volume control mode(TV= 520 ml, freq- 14/min, PEEP- 0, Pressure support-15). Later, inj. succinylcholine 50 mg IV given again for muscle relaxation. After procedure, anaesthesia discontinued and patient extubated when spontaneous breathing and eye

opening was present.

After extubation patient could not maintained the saturation which drops down to 64% and patient was reintubated with inj. Propofol 150mg IV and inj. Succinylcholine 25 mg IV. Then, patient shifted to ICU and put on ventilatory support. On same day, T- piece trial was given in evening, which was unsuccessful. Patient's relative were reinterviewed and gave history of difficulty in chewing and dyspnea along with generalised weakness for past few months. Later by neurologist opinion provisional diagnosis of myasthenia or guillain bare syndrome was made. Empirical treatment with inj. Pyridostigmine 60 mg QID and inj. Methylprednisolone 60 mg OD started and AchR-Ab, CT chest, MRI brain were advised. AchR-Ab confirmed diagnosis of myasthenia gravis. Our patient discharged after one month, on same medications with tracheostomy tube insitu. Followup was suggested in outpatient clinic.

DISCUSSION

Neuromuscular weakness and easy fatigability are the hallmarks of myasthenia gravis which results from autoimmune damage to the post synaptic nicotinic receptors.¹ In majority of patients undergoing surgical procedures, the diagnosis of diseases involving neuromuscular issues such as myasthenia gravis is made beforehand.

The antibodies against postsynaptic nicotinic receptors in myasthenia gravis lead to loss of safety margin of neuromuscular transmission. This causes increased sensitivity to non depolarising muscle relaxants³ and resistance to depolarizers with a chance of phase II block.

Balanced anaesthesia is a satisfactory and safe technique for diagnosed case of myasthenia; with use of inhalational agents as inducing agent muscle relaxants can be avoided which facilitate early extubation and avoid postoperative mechanical ventilation.

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Sevoflurane is agent of choice for induction and maintenance; propofol with sevoflurane and analgesic can be used in combination for providing adequate depth of anaesthesia. And if in case muscle relaxants are needed, short acting agents shall be preferred, and clinical monitoring of neuromuscular function permits safe titration of relaxants in patients. Although adequate respiratory efforts are present in patients during follow up in postoperative room, recurrence can be seen in subsequent periods. Ortiz-gomez et al⁴ reported, recurrence after extubation.

Sugammadex is a modified gamma cyclodextrin used successfully in a myasthenic patient to reverse rocuronium or vecuronium induced deep level of neuromuscular block. In our case, we believe that it is difficult to make a distinction of whether the preoperative dysphagia was because of parapharyngeal mass or undiagnosed myasthenia gravis. Importantly, it should be pointed out that the origin of some signs, e.g. Weakness or dysphagia, could also be neurogenic, including peripheral neuropathies or motor neuron disease.

CONCLUSION

Myasthenia gravis is an auto immune disease related to neuromuscular junction and is rare entity. It is important not to forget the reality that care should be taken in terms of possible complications because of neuromuscular blocking agents and we should be aware of some unrecognized cases and consider myasthenia gravis as differential diagnosis for such patients.

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