ISSN: 2581 – 3633
PubMed - National Library of Medicine - ID: 101745081

International Journal of Medical Science and Advanced Clinical Research (IJMACR)

Available Online at:www.ijmacr.com

Volume – 6, Issue – 6, November - 2023, Page No. : 60 - 61

Anaesthetic Management of Thymectomy In Myasthenia Gravis Patient

[1]Dr. Neethi T P, [2]Dr. Prashanth Kumar, [3]Dr. Avva Anisha

Corresponding Author: Dr. Neethi T P

How to citation this article: Dr. Neethi T P, Dr. Prashanth Kumar, Dr. Avva Anisha, "Anaesthetic Management of Thymectomy In Myasthenia Gravis Patient", IJMACR- November - 2023, Volume – 6, Issue - 6, P. No. 60 – 61.

Type of Publication: Case Report

Conflicts of Interest: Nil

Introduction

Myasthenia gravis is an autoimmune disorder of neuromuscular junction. Autoantibodies against acetyl choline receptor- destroy Ach receptor of NMJ and cause classic transmission failure with muscle weakness and fatigue. There is striking association between myasthenia gravis and hyperplasia of thymus with more than 70% of MG patients having thymus hyperplasia& 10% having thymomas.

There are few patients with subclinical myasthenia gravis who is seropositive for Anti AchR antibodies without neurologic symptoms.

Anaesthetic management of thymectomy in MG patients are challenging because of their sensitivity to non depolarizing neuro muscular blocking agents and chances of post thymectomy myasthenic crisis. We report the anaesthetic management of a patient with subclinical MG who underwent thymectomy.

Case Report

A 40 year old female, with BMI 29 Kg/m2 with no comorbidities presented with difficulty in breathing, swallowing, neck and chest pain since 3 months. No h/o neurological symptoms. Systamic examination ruled out neuro muscular abnormalities. Routine blood investigations, ECG ,2Decho were normal. Chest x ray showed mediastinal mass. So CECT thorax was done in which they diagnosed as thymoma/thymic carcinoma. Since thymoma has strong association with myasthenia gravis, blood test was done to detect AchR-Ab came as positive 0.5 nmol/L. Patient posted for elective thymectomy.

On the day of surgery as a premedication T.alprazolam 0.5 mg was given 1 hour before shifting to OT. All ASA recommended monitors attached, 2 peripheral large bore cannula secured. inj,. Glycopyrolate 0.2 mg and fentanyl 100 mcg was given . After preoxygenating with 100% oxygen for 3 minutes, induced with Inj. Propofol 2 mg/kg, inj. Rocuronium 0.6 mg/kg given and intubated with 7.5 size endotracheal tube. Thoracic Epidural catheter was also inserted at the same time. Maintained with oxygen, air, propofol infusion, intermittent boluses of fentanyl, epidural top up and rocuronium (0.1 mg/kg) based on TOF measurement throughout the surgery. At the end of the surgery neuromuscular blockade was reversed with

sugammadex. Post operative pain was well managed with epidural infusion with 0.25% bupivacaine.

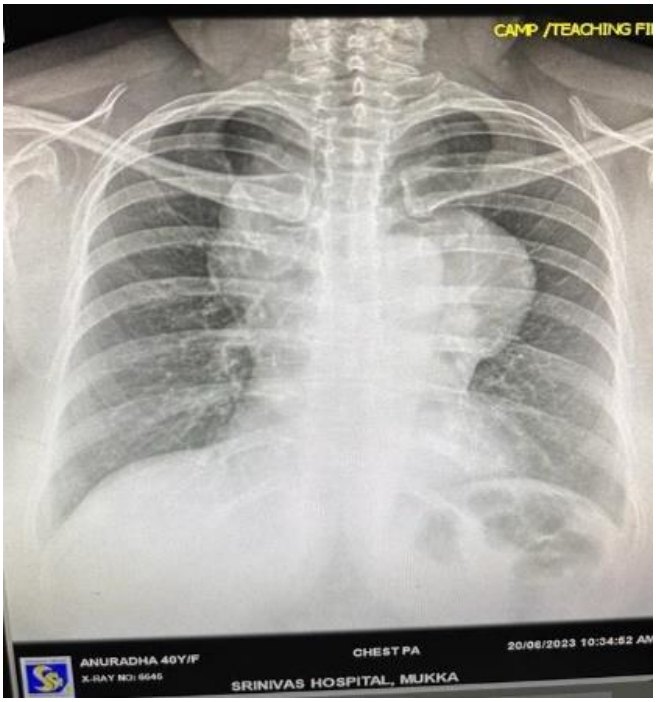

Figure 1: Chest Xray

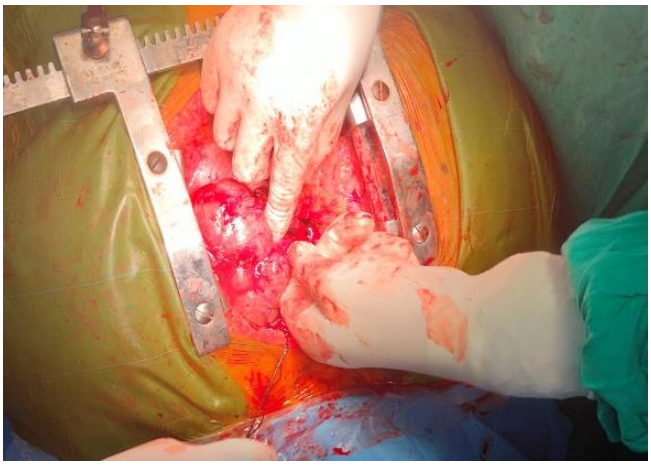

Figure 2: Intraoperative Image of Thymoma

Discussion

we managed thymectomy case in subclinical myasthenia gravis patient without any complication by general anaesthesia and epidural analgesia. Avoided inhalational agent since it has an adverse effect of inhibition of neuromuscular transmission. Administered minimal amount of nondepolarizing muscle relaxant-rocuronium based on TOF measurement and reversed with sugammadex. Epidural analgesia for post operative pain management avoided the usage of opioid, thereby post operative respiratory complications

Conclusion

Surgeries in myasthenia gravis patients can be managed well if we focus to avoid exacerbation of muscle weakness and preserve respiratory function. Appropriate use of muscle relaxants, General Anaesthesia, Epidural analgesia will prevent most of the intra op and post op complications.

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