Case Report

Thoracic epidural anaesthesia for thymectomy in myasthenia gravis

Begum Marjan Mohol Choudhury[1*], Mohammad Alauddin[1]

[1]*Jr. Consultant, Dept. of Anaesthesiology, NICVD, Dhaka.*
**** Corresponding Author :** Dr. Begum Marjan Mohol Choudhury*

Abstract

Myasthenia gravis is a disease of great significance to the anaesthesiologist, because it affects the neuromuscular junctions. Many patients with this condition are treated by surgical thymectomy. Thymectomy for myasthenia gravis requires special attention as far as the type of anesthesia and use of muscle relaxants. We use high thoracic epidural anaesthesia for trans-sternal thymectomy to avoid the use of muscle relaxants and volatile anesthetic agents which prevented the laryngeal injury and potential post-operative respiratory failure.

***Key words :** Myasthenia gravis, Thymectomy.*

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Case report

A 40 years old 50 Kg female patient was admitted into a private clinic for thymectomy. She was diagnosed as a myasthenia gravis. Her medical management included pyridostigmine and corticosteroids for controlling her symptoms. In this case we decided to perform the operation under thoracic epidural anaesthesia (TEA). We discussed the procedure with the patient. After taking informed consent on the day of surgery, early in the morning the patient was pre-medicated with 7.5 mg midazolam orally 1 hour before arrival at operation theater. A thoracic epidural catheter was inserted at the T_1 and T_2 level under local anaesthesia using 18G Tuohy needle with patient in sitting position through midline approach using hanging drop technique. The block level was tested by 3ml 2% lignocaine.

Anaesthesia was induced with a mixture of 8 ml of 0.25% bupivacaine + 7 ml of 1% lignocaine + 25µg fentanyl citrate administered through the epidural catheter as a bolous. After 20 minutes the onset of anaesthesia was completed and level of block was tested by pin-prick discrimination. The upper level of block was C_6 and the lower level was T_{10}. The patient breathed 6 liters of Oxygen per minute using a face mask. The patient was continuously monitor by Intra-Arterial Blood Pressure, ECG, SpO_2, ABG analysis, S. Electrolytes, Respiration and Urine output. The mean operating time was 1 and 1/2 hour and the patient was able to drink within 1 hour after operation. Post-operative analgesia was maintained with 0.125% bupivacaine 4 ml and fentanyl citrate 1 µg/ml through epidural catheter 6 hourly. No other recue analgesia was required.

Discussion

Trans-sternal thymectomy in awake patient without general anaesthesia was performed with high thoracic epidural anaesthesia. Thoracic epidural anaesthesia is also have been perform in awake CABG on beating heart. TEA provides excellent conditions for thymectomy in myasthenic patient because general anaesthesia require muscle relaxant which may need to prolonged post-operative ventilation of the patient and increased chances of post-operative respiratory failure[3,4]. TEA was advantageous in that- avoidance of muscle relaxants and volatile anaesthetic agents prevented the laryngeal injury and potential post-operative respiratory failure[1,2]. So, ultimately the choice of anaesthetic technique depends on patient's suitability, preference of the surgeon and anaesthetist's experience and expertise.

Conclusion

Use of TEA for awake thymectomy was feasible and the patient was maintained with good analgesia, stable cadio-respiratory and haemodyanamic status,

early ambulation, oral feeding, better post-operative analgesia and reduced peri-operative morbidity.

References

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