Take a deep breath but don't relax: Anesthesia for thymectomy in myasthenia gravis

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Central Message

Thoracoscopic thymectomy for myasthenia gravis can technically be performed in spontaneously breathing patients, but further studies are needed to determine any benefits.

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The anesthetic management of patients undergoing thymectomy for myasthenia gravis (MG) remains problematic due to the risk of precipitating myasthenic crisis (MC) postoperatively with prolonged need for mechanical ventilation. Patients with MG are often hypersensitive to the use of neuromuscular blocking agents that are administered to facilitate the delivery of general, endotracheal anesthesia, and their effects can be unpredictable. The risk of developing MC after thymectomy has been reported to be in the range of approximately 5% to 20%.¹⁻³

In this issue of the *Journal*, Jiang and colleagues⁴ present a retrospective, comparative study of 2 cohorts of patients that underwent thoracoscopic thymectomy for MG: one cohort received standard, general endotracheal anesthesia during the surgical procedure, whereas the other was intubated with a laryngeal mask airway and allowed to spontaneously ventilate. The authors found a significantly lower rate of postoperative MC and a shorter hospital stay in the spontaneously breathing patients and should be commended on their continued work pioneering the performance of thoracic surgery in spontaneously breathing patients.

Although the study clearly demonstrates the feasibility of the spontaneously breathing approach in thymectomy for MG, drawing definitive conclusions from the comparison of the 2 groups regarding the advantages of spontaneous ventilation over conventional general endotracheal anesthesia is more challenging. Although the authors used propensity matching to try to eliminate selection bias in some of the general baseline characteristics, this approach will not completely eliminate the effect of confounding factors in a retrospective series of patients. In addition, the 2 groups were managed differently in more ways other than the use of endotracheal intubation, especially regarding the uses of neuromuscular blocking agents and postoperative epidural pain control. Furthermore, it is difficult in a retrospective study to accurately analyze successful weaning from

mechanical ventilation in the absence of a prospective protocol. Finally, the ability to draw conclusions regarding the length of hospital stay when factors other than medical necessity influence hospital discharge policies is extremely limited, which represents an issue in some countries outside of the United States.

Despite these concerns, strategies aimed at determining the best anesthetic management of patients with MG undergoing thymectomy warrant further investigation. Although the authors have demonstrated technical feasibility of their approach to this problem, they will need to continue their work in the form of a prospective clinical trial, ultimately in a randomized fashion with established protocols to demonstrate any beneficial effect for these patients.

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