

Background

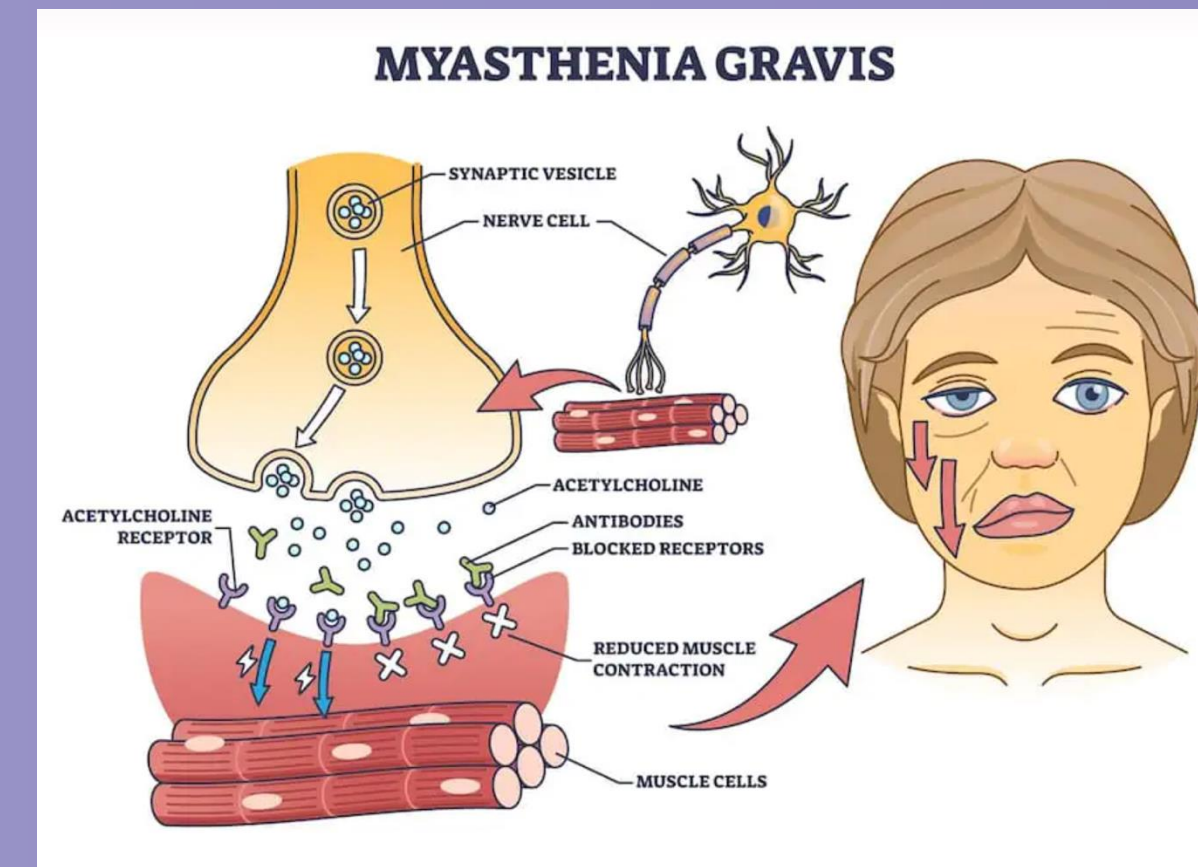
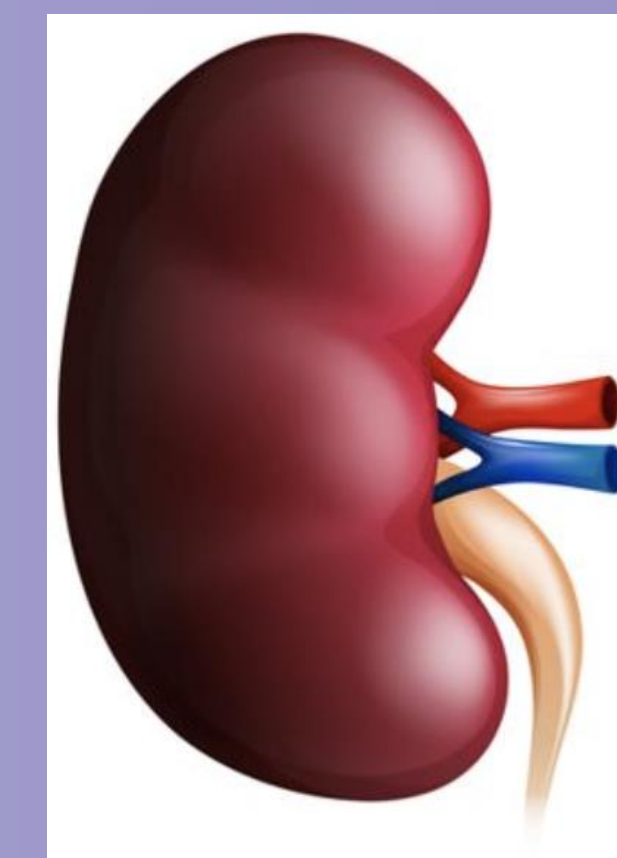
- Myasthenia gravis (MG)** is an autoimmune disorder of the neuromuscular junction caused by antibodies against nicotinic acetylcholine receptors, resulting in activity-related skeletal muscle weakness.
- Patients with MG pose significant anesthetic challenges due to heightened sensitivity to neuromuscular blockers, increased risk of perioperative respiratory failure, and potential for myasthenic crisis.
- Renal transplantation** is traditionally performed under general anesthesia with endotracheal intubation.
- Increasing medical complexity in patients with end-stage renal disease (ESRD) has prompted exploration of alternative anesthetic strategies.

Case Presentation

- 59-year-old female with **end-stage renal disease (ESRD)** and longstanding **myasthenia gravis (MG)** (diagnosed 1982, status post thymectomy) presenting for cadaveric kidney transplant.
- History of MG flares with bulbar involvement (facial, tongue, neck, and ocular weakness), dysphagia, and nasal speech.
- Current management includes azathioprine, pyridostigmine, and intermittent IV efgartigimod (Vyvgart); prior treatments include plasma exchange, steroids, and cyclosporine.
- Most recent flares occurred November 2024 and February 2025; classified as MGFA Class IIb.
- Pt endorsed **h/o prolonged intubation** from prior surgery

Risk Factors for Post-op Pulmonary Complications

Disease duration > 6 years
Other coexisting pulmonary disease
Daily Pyridostigmine use >750mg
Vital Capacity < 2.9 L
Negative Inspiratory Pressure not less than -20cm H2O



Intra-operative Events

- Pre-operative laboratory studies were appropriate for proceeding with regional anesthesia.
- Bilateral anterior quadratus lumborum (QL) blocks** were performed pre-operatively using 20 mL of 0.25% bupivacaine per side (40 mL total).
- In the operating room, a **combined spinal-epidural (CSE)** was placed at L3–L4 with 1.6 mL of 0.75% hyperbaric bupivacaine and 15 mcg fentanyl administered intrathecally.
- Epidural catheter secured at 10 cm; negative test dose (3 mL 1.5% lidocaine with epinephrine). A T4 sensory level was achieved.
- The procedure was well tolerated with **minimal adjuncts**; 10 mL of 0.5% bupivacaine was administered epidurally during closure for additional relaxation and analgesia.
- Timeline: CSE at 1200, incision at 1220, reperfusion at 1259, and procedure completion at 1359; mild sedation provided during the final 25 minutes.
- Pt met eligibility criteria for **discharge on POD#1**

Discussion

- Demonstrates the feasibility of **awake renal transplantation** in a patient with MG using combined spinal-epidural (CSE) anesthesia with adjunct quadratus lumborum (QL) blocks.
- Neuraxial anesthesia** provides rapid onset, reliable muscle relaxation, and titratable analgesia via an indwelling epidural catheter.
- With acceptable coagulation parameters, neuraxial techniques can be safely performed in patients with ESRD.
- QL blocks (T8–L2 spread) offer additional somatic analgesia, complementing neuraxial blockade and enhancing patient comfort.
- Regional anesthesia for renal transplantation has **not been associated with increased morbidity or mortality** compared with general anesthesia and may benefit patients at high respiratory risk.
- This **patient's stable intraoperative course**, minimal opioid use, and excellent recovery support regional anesthesia as a viable option in carefully selected transplant recipients.

References

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