Myasthenia Gravis (MG) is a chronic neuromuscular disorder characterized by the formation of autoimmune complexes to acetylcholine receptors at the motor endplate, causing muscle weakness made worse by exertion. The most common form of MG in the neonate is transient MG and is the result of placental transfer of acetylcholine antibodies from a mother with MG (1). Anesthesia in patients with MG is associated with an increased risk of complications, primarily related to an exquisite sensitivity to neuromuscular blocking agents (2).

Several case reports have described the use of sugammadex to reverse neuromuscular blockade in neonates (3,4) and in adult patients with MG (5), but none have demonstrated the use of sugammadex in neonates with MG. We present the case of a three week-old male with transient MG and pyloric stenosis who underwent laparoscopic pyloromyotomy.

Patient D was a three week-old 3.2kg male, born full-term. He had been in the NICU since birth for respiratory support in the setting of transient neonatal MG secondary to transplacental antibody transfer. Antibody tests were significant for high levels of acetylcholine receptor binding and modulating antibodies. He was on high-flow nasal cannula but breathing comfortably. He had continued difficulties with feeding despite pyridostigmine treatment with worsening emesis after eating. Ultrasound was consistent with pyloric stenosis. The patient was therefore scheduled for laparoscopic pyloromyotomy.

Sugammadex has previously been used in neonates without MG and in adult patients with MG for the reversal of neuromuscular blockade. This case represents the first documented use of sugammadex for a neonate with transient MG.

### References