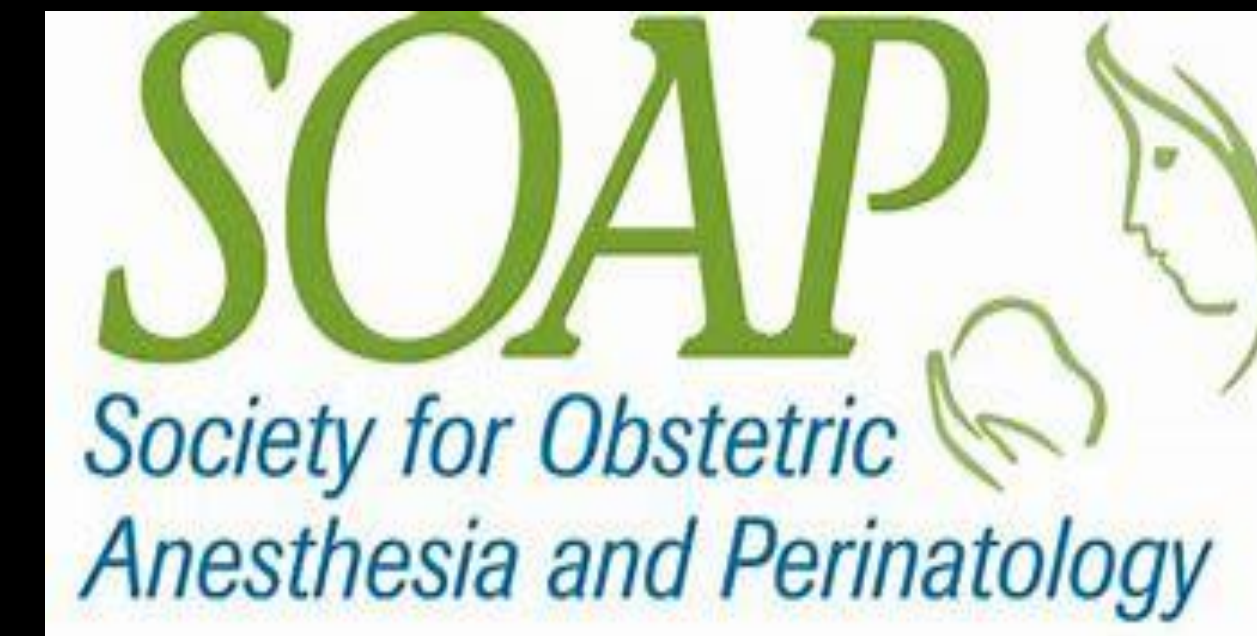


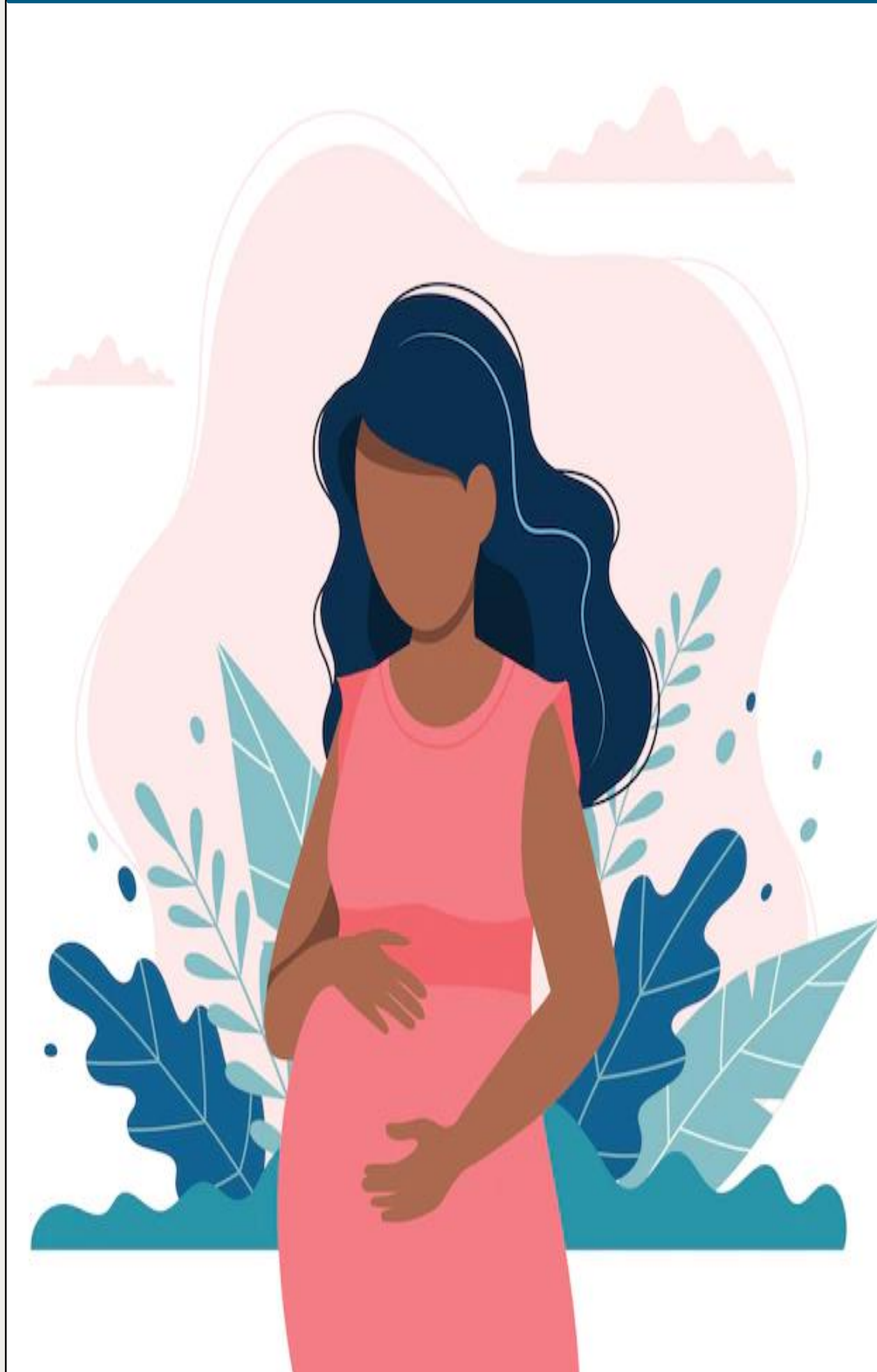
Respiratory Insufficiency in a Patient with Myasthenia Gravis: Utilizing Neuraxial Anesthesia

Ashley N. Lewis MD, Jeanette Bauchat MD

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28-year-old G1P0 with Myasthenia Gravis



PRENATAL MANAGEMENT

- New symptoms: bulbar and buccal weakness
- Trial of Pyridostigmine & Prednisone
- Side effects → dose changes
- Late transfer of care for uncontrolled symptoms

PRE-OP MANAGEMENT:

- Epidural dosed with 3% 2-Chloroprocaine and Fentanyl
- T4 sensory block confirmed
- Antiemetic medication given

POST-OP COURSE:

- Extensive respiratory monitoring
- Supplemental O₂ weaned
- Incidental finding of Meralgia Paresthetica
- Discharged POD#5

- Induced at 39w3d
- Received early labor epidural
- Continuous pulse oximeter
- Emergent Cesarean delivery due to NRFHTs

LABOR COURSE:

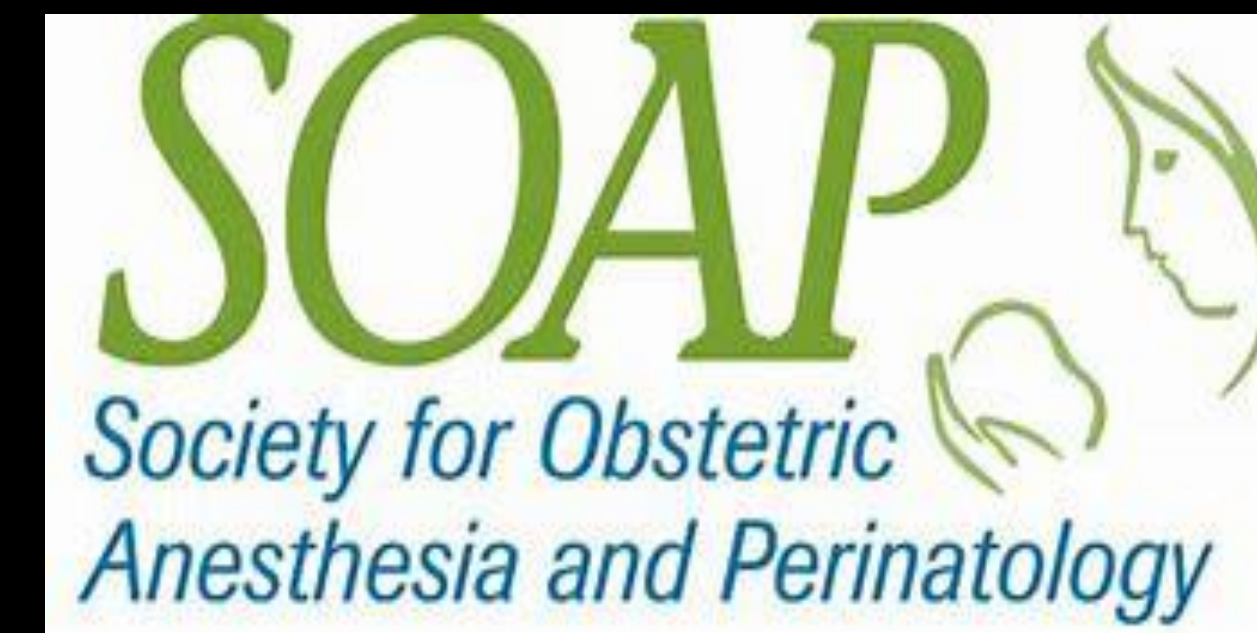
- Respiratory Insufficiency after surgical block
- Discussed ventilatory support vs. general anesthesia
- Ventilation assistance for the duration of the case

INTRA-OP MANAGEMENT:

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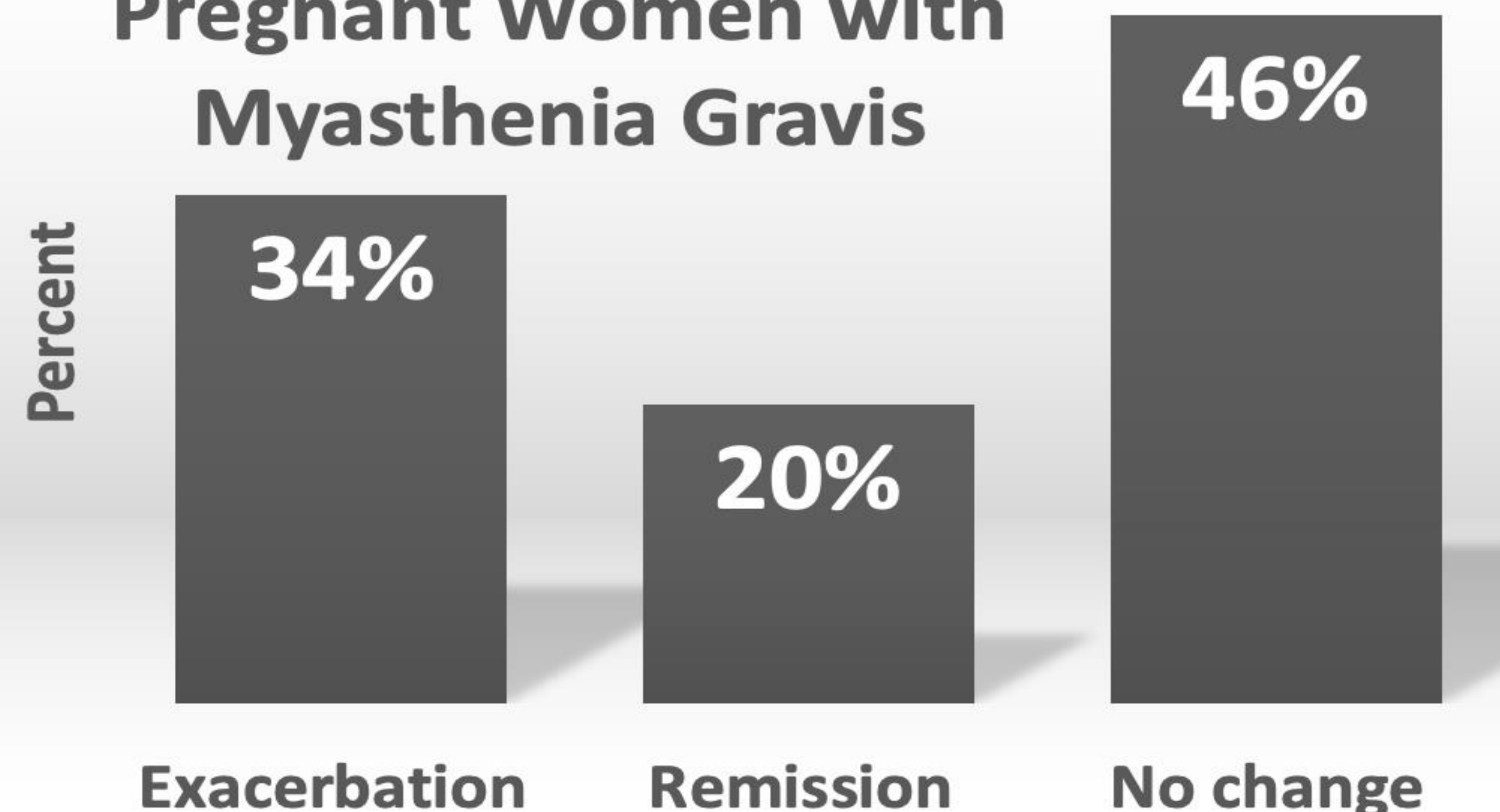


PATHOPHYSIOLOGY

Autoantibodies against acetylcholine receptors, anti-muscle specific kinase (MuSK), or anti-lipoprotein receptor-related protein 4 (LRP4) antibodies leading to skeletal muscle weakness.

CHANGES RELATED TO PREGNANCY

Change of Symptoms in
Pregnant Women with
Myasthenia Gravis



Prognostic factors:

1. Duration of disease before pregnancy
2. Myasthenia score
3. Decrement on pre-partum ENMG.

ANESTHETIC CONCERNS

Respiratory Considerations:

Peripartum

Spirometry

- Vital Capacity (VC)
- Negative Inspiratory Force (NIF)

Continuous Pulse Oximetry

Consider mechanical ventilation:

- VC < 15 mL/Kg
- NIF < 20 cm H₂O
- SPO₂ < 88%

Commonly used medications that may cause an exacerbation

Anesthetics: Inhalational agents, Local anesthetics (Lidocaine)

Antibiotics: Aminoglycosides, Macrolides, Ampicillin

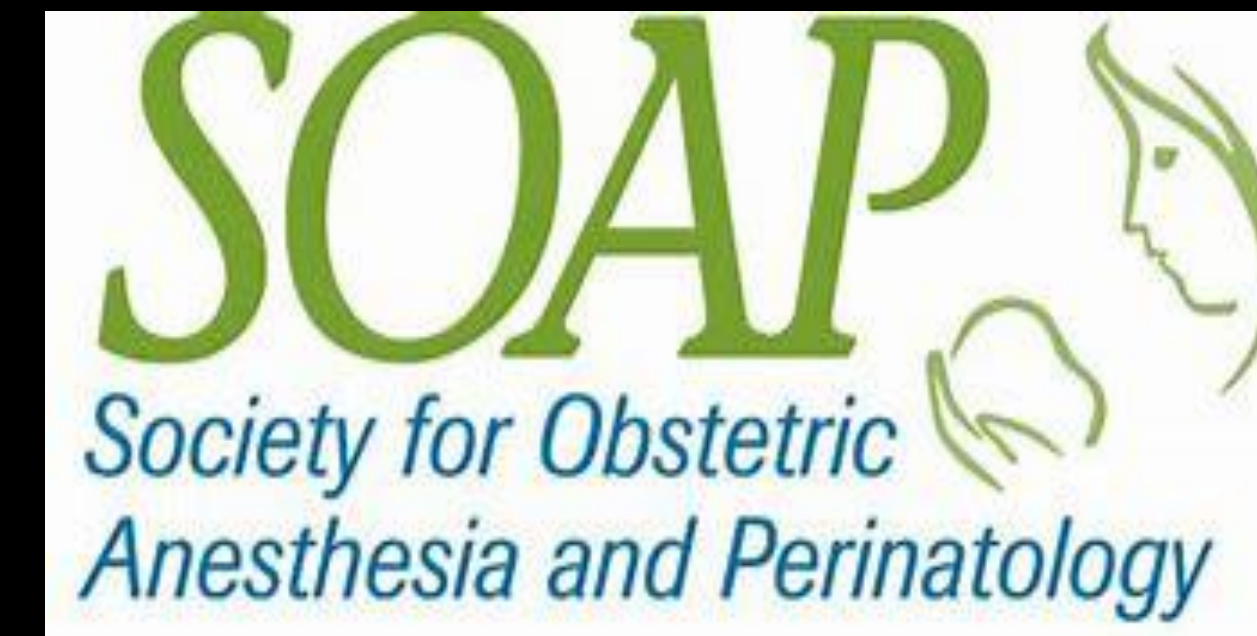
Glucocorticoids: Dexamethasone

Miscellaneous: Gabapentin, Magnesium, Opioids

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PRENATAL MANAGEMENT

Medical Management

- Pyridostigmine
- Prednisone
- Azathioprine/Tacrolimus
- Cyclosporine

Surgical Management

- Thymectomy

Respiratory Monitoring

- PFTs

ANESTHETIC MANAGEMENT

NEURAXIAL ANESTHESIA

- Continuous respiratory monitoring
- Early labor analgesia
- Consider decreased bolus dose to avoid respiratory compromise
- Consider incremental epidural dosing to T4 sensory level (if time allows)
- Weigh the risk and benefits of Ester vs. Amides

GENERAL ANESTHESIA

- Careful use of anesthetic agents as they promote respiratory depression and may lead to exacerbation
- Plan for higher postop level of care
- Paralytics:
 - Unpredictable response to NDNMA
 - Resistant to Succinylcholine
- Reversal:
 - Sugammadex >Neostigmine

LEARNING POINTS: UNCONTROLLED MG

MG Crisis:

- IVIG
- Plasmapheresis

Respiratory Insufficiency

- Provide Supplemental Oxygen
- Mechanical Ventilation

Pain Control

- TAP blocks
- Multimodal analgesia
- Oral opioid supplementation

