

# Masseter Spasm

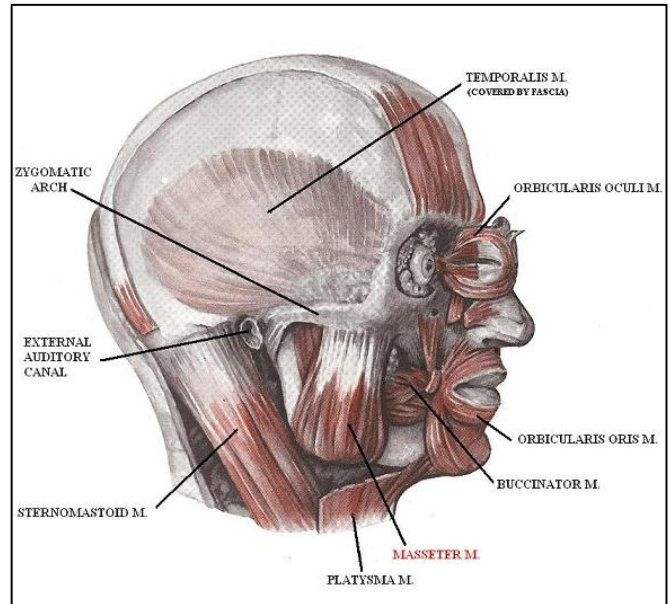
**Anesthetic Pearls:** The Anesthetic Implications of Masseter Spasm

AKA: **Trismus** or **Masseter Muscle Rigidity (MMR)**

**Presentation:** Rigidity of jaw muscles that prevents mouth opening following Succinylcholine administration.

**Characteristics:**

1. Transient phenomenon, usually lasting less than 10 minutes
2. Flaccid paralysis of extremities
3. Mask / vent usually not impaired
4. Tachycardia (frequent ventricular arrhythmias)
5. Increased  $\text{ETCO}_2$
6. Serum CK markedly elevated
7. Incidence of progression to fulminate Malignant Hyperthermia (MH) varies according to different sources (most likely to develop 20-30 minutes after MMR)
8. Additional dose of Succinylcholine may cause severe exacerbation



**Differential Diagnosis:**

- A. Inadequate skeletal muscle relaxation
- B. Abnormal physiologic response to Succinylcholine
- C. TMJ dysfunction
- D. Myotonic reaction
- E. Malignant Hyperthermia

**Outcome:**

1. Contracture tests show that 50% of peds and 25% of adults with MMR also test positive for MH
2. Succinylcholine found to transiently increase masseter muscle tension
3. MMR incidence has 10-fold increase in children with inhalation induction followed by Succinylcholine

**Recommendations:**

- A. Avoid routine use of IV Succinylcholine after inhalation induction with potent agent
- B. If MMR occurs, safest course is to assume MH is the cause and post-pone elective surgery (must do MH work-up)

**Board Question:**

A 5-year-old child is having a tonsillectomy under general anesthesia. Forty-five seconds after administration of Succinylcholine to facilitate endotracheal intubation, attempted laryngoscopy reveals masseter spasm. The most appropriate intervention is:

1. Give second dose of Succinylcholine
2. Perform blind nasal intubation and proceed
3. Proceed with surgery with GA via mask using nitrous, oxygen, and halothane
4. Cancel surgery but no work-up necessary
5. Cancel surgery, recommend muscle biopsy and work-up for MH