## Introduction
- We present a case of isolated acute masseter rigidity after induction of anesthesia.
- Succinylcholine has been implicated in cases of masseter spasm, however a depolarizing NMB was not utilized in this case.

## Past Medical History
- 11 y.o., 30.6 kg adopted white male with a history of ADHD
- Presented with acute appendicitis
- Daily medications: aripiprazole, clonidine, and methylphenidate
- No previous anesthetic exposure, unknown family history

## Anesthetic Course
- Induction performed utilizing a modified rapid sequence technique
- Fentanyl, midazolam, propofol, and rocuronium IV; no volatiles
- One minute following induction masseter rigidity noted: maximal mouth opening 1 cm. TOF noted to be 1/4. RSI technique aborted and easily mask-ventilated.
- At five minutes post induction time instrumentation again 1 cm maximal incisor opening. TOF 0/4. No other muscle group was noted to have rigidity. V/S, ETCO2, & temperature WNL
- Attempts at fiberoptic & DL intubation unsuccessful
- Successful OET placement with video-laryngoscope with several assisting by carefully overpowering the trismus
- The operation was performed without further complications
- Extubation after NMB full-reversal, TOF 4/4, and patient fully awake.
- In the PACU the patient c/o mild jaw pain and mouth opening 1.5 cm
- Psychiatry consult: diphenhydramine 1mg/kg IV recommendation
- Twenty- five minutes after administration full ROM of jaw and w/o pain
- Patient discharged same day

## Differential Diagnosis

<table>
<thead>
<tr>
<th>Muscle rigidity</th>
<th>Malignant Hyperthermia</th>
<th>Neuroleptic Syndrome</th>
<th>Dystonic Reaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes; may have isolated masseter rigidity w/ succinylcholine</td>
<td>Yes</td>
<td>Variable rigidity</td>
<td></td>
</tr>
<tr>
<td>Heart Rate</td>
<td>Tachycardia</td>
<td>Tachycardia</td>
<td>No change</td>
</tr>
<tr>
<td>EtCO2</td>
<td>Increased</td>
<td>Mild elevation</td>
<td>Normal range</td>
</tr>
<tr>
<td>Fever</td>
<td>&gt; 40 degrees</td>
<td>&gt; 40 degrees</td>
<td>Normothermic</td>
</tr>
</tbody>
</table>

## Discussion
- MH must be on the top of the differential due to it’s lethal nature
- Neuroleptic syndrome should be considered as well
- Typical triggers for MH include volatile anesthetics and succinylcholine which were not utilized prior to masseter spasm
- No V/S instability, ETCO2 alteration, or other clinical signs noted in this case
- Dystonic reactions can occur with anti-psychotic medications, especially those manipulating the dopamine receptor
- Aripiprazole is a psychotropic medication likely responsible in this case
- Anticholinergic agents have been an effective treatment in dystonia

## Conclusions
- In the case of muscle rigidity, MH must be ruled out
- MH can be subtle, however a hallmark sign is elevating ETCO2
- Succinylcholine can cause isolated trismus w/o development of MH
- This case demonstrates a dystonic reaction that resulted in isolated masseter spasm
- Diphenhydramine was an effective treatment for trismus in this case
- We recommend immediate treatment with diphenhydramine if faced with isolated trismus with a history of psychotropic medication use

## References