Overview

Otolaryngology accounts for 450,000 inpatient and 4 million outpatient surgeries per year in the US. The incidence of anesthesia medication errors is 0.85% - which translates to a potential 38,000 ENT surgeries per year. 85% of anesthesiologists surveyed report at least one medication error or 'near-miss'. Syringe swaps were the most common. 3.3% of 446 otolaryngologists surveyed reported anesthesia-related errors over the prior 6 months. The majority of these errors result in a 'non-event' for the patient. Otolaryngologist familiarity with the presentation of awake succinylcholine administration is beneficial in alerting all team members to this possibility and averting further negative consequences.

Case Report

A healthy woman was brought to the OR for an elective ear canal procedure. During induction, she had tonic-clonic movements of her limbs and was nonresponsive for 2 minutes. She remained unable to move but sentient for some time subsequently. With this unanticipated event, surgery was cancelled. Seizure workup was negative. Eventual investigation indicated that the patient had received succinylcholine instead of fentanyl intravenously. Timely recognition of these symptoms would have permitted the surgery to proceed and would have saved the patient unnecessary duress.

Instead, her surgery was cancelled, she underwent an expensive seizure workup, she and her family, as well as her doctors, experienced significant anxiety, and she had significant myalgias for 2 weeks following the event.

Educational Objectives:

- Explain the clinical presentation of common medication swap errors during anesthesia care.
- Discuss institutional remedies to minimize such errors.
- Learn how to diagnose such an error in a timely fashion.

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When Things Go Wrong:
Anesthesia Medication Errors in Otolaryngology Surgery

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Common Anesthetic Induction Protocol for Routine Procedures under General Anesthesia

1. Placement of the intravenous catheter and line
2. Administration of IV midazolam for anxiolysis/amnesia
3. Pre-oxygenation
4. Administration of IV Fentanyl as an opioid - also provides analgesia
5. Administration of IV succinylcholine or other muscle relaxant.
6. Intubation.

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Selected References

5. Hirabayashi, Regional Anesthesia and Pain Medicine Vol. 30 No. 3 May-June 2005

CONCLUSION

In this case, it appears that the patient received midazolam and then a subtherapeutic dose of succinylcholine instead of fentanyl. She manifested 2 minutes of unresponsiveness, transient paralysis and a 'locked in' feeling of being awake but trapped in an unwaking body. She reported being fully aware of the events that transpired once she ‘came to’ after 2 minutes of unresponsiveness. She also had significant myalgias for about 2 weeks afterwards.

These are symptoms consistent with awake succinylcholine administration.

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