Reproducible Myoclonus Following Mask Induction with Sevoflurane in a Healthy 12 Year Old Boy

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SUMMARY:
We present the case of a 12 year old male with reproducible myoclonic activity with the administration of sevoflurane. There have been case reports on myoclonus after sevoflurane administration. This case discusses repeated myoclonic activity after sevoflurane administration.

CASE:
A 12 year old male with a history of abdominal pain presented for upper endoscopy. The patient was an otherwise healthy male, he has no known drug allergies, and he is not taking any medications.
His anesthetic history was notable for myoclonic activity noted on induction of anesthesia with sevoflurane for endoscopy two years previously. The myoclonus was noted in the anesthetic record, the mother of child was notified, and the patient was referred for work-up by neurology. The patient’s mother decided not to pursue workup as the patient was otherwise healthy, and never exhibited seizure activity prior or since that time.
On the day of presentation, the previous anesthetic record was reviewed and the history reviewed with mother of child. Decision was made to proceed with mask induction with sevoflurane for IV placement followed by propofol sedation. During administration of sevoflurane, the patient began having myoclonic activity. Vital signs were appropriate throughout the episode. Patient continued to breathe spontaneously. After IV access was obtained, sevoflurane was discontinued, propofol administration began, and shortly thereafter the myoclonic activity resolved. The patient was maintained on propofol infusion, and remained spontaneously breathing during the case. Emergence and recovery from anesthesia in the PACU was uneventful, the patient’s family was made aware of what happened, and the patient was discharged home that day.

DISCUSSION:
It has been documented that sevoflurane can cause myoclonus in children. It is not associated with seizure activity as shown by Nieminen et. al1. Though other studies have shown that using EEG monitoring, sevoflurane mask induction will induce epileptiform waves on EEG without motor disturbances2. There is a case report reporting myoclonus with sevoflurane induction that resulted in a respiratory alkalosis and was not terminated by administration of IV thiamylal3.
Our patient’s myoclonic activity appeared to be reproducible as it has happened to him before; it appeared to be terminated by administration of propofol; and as reported in the literature, had an uneventful recovery and was able to be discharged home from our PACU.
We feel it is important for anesthesiologists to recognize that patients undergoing mask induction with sevoflurane may have myoclonic activity, but should be watched in the PACU for sequela.

REFERENCES