

Drug mislabeling errors in (obstetric) anaesthesia

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LETTER TO THE EDITOR

It is with interest that I read the recent article (case report) by Baele (1) on drug errors in anaesthesia, which reminds us practicing anesthesiologists (one more time !) of hidden, although almost always present dangers of drug (mislabeling) errors in clinical practice of anesthesiology.

Orser *et al.* (2) conducted a self-reporting survey of the members of the Canadian Anesthesiologists' Society regarding the frequency of drug errors and concluded that most anesthesiologists (85% of the participants) experienced at least one drug error. The commonest error was a syringe swap that involved a muscle relaxant. Most errors were of minor consequence, however, serious morbidity and mortality resulted from clearly preventable events.

Fasting and Gisvold (3) studied the pattern and frequency of drug errors in clinical anaesthesia and concluded that drug errors are uncommon, and represent a small part of anaesthesia problems but still have the potential for serious morbidity. Syringe swaps most commonly involved muscle relaxants and occurred most often between syringes of equal size, and were not eliminated by color-coding of labels.

Strock *et al.* (4) recently described the first reported drug mislabeling error (mislabeled hospital pharmacy premixed ready-to-use syringes) in the practice of obstetric anaesthesia, which led to an inadvertent administration of succinylcholine (instead of ephedrine) for the treatment of hypotension in a laboring parturient. A 23-year-old, otherwise healthy female at 38 weeks gestation laboring under uneventful continuous lumbar epidural anaesthesia required ephedrine for the treatment of hypotension. A 10 mg (2 ml) intravenous dose of

“ephedrine” was administered by the anaesthesia resident. Approximately 45-60 seconds later, the patient reported pain behind her eyes and difficulty breathing. Apnea and loss of consciousness quickly followed and a code blue was called. Mask ventilation was performed until spontaneous breathing resumed and consciousness was regained 1-2 minutes later. Maternal and fetal vital signs remained stable throughout the event. There were no untoward sequelae, and the patient delivered a healthy newborn several hours later. Independent laboratory analysis of the content of the syringe labeled as ephedrine confirmed mislabeling error (the syringe contained 15 mg/ml of succinylcholine). The authors concluded that in obstetric anaesthesia drug mislabeling errors might pose even greater dangers (compared to the main operating room) as such events impact the well being of two patients the mother and the fetus.

Reference

1. Baele P. L. *Miss-'n-mix and mimics. Drug errors in anaesthesia and resuscitation. All drugs in identical flasks and flasks (reused for uncommon toxic substances.* ACTA ANAESTHESIOLOGICA BELGICA, **56**, 177, 2005.
2. Orser B. A., Chen R. J., Yee D. A. *Medication errors in anaesthetic practice: a survey of 687 practitioners.* CAN J ANAESTH, **48** 139-146, 2001.
3. Fasting S., Gisvold S. E. *Adverse drug errors in anaesthesia, and the impact of coloured syringe labels.* CAN J ANAESTH, **47**, 1060-1067, 2000.
4. Strock D., Kuczkowski K. M., Greenberg M. *Accidental administration of succinylcholine for the treatment of hypotension in a labouring parturient.* CAN J ANAESTH, **51**, 853-854, 2004.

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