

Oops, Wrong Bottle

Commentary by Francis L. Counselman, MD

A 42-year-old man presented to the ED with a cut to his left forearm from a piece of metal. The patient only complained of pain at the site of injury; he had no numbness or weakness of the left hand. The patient was otherwise in good health, was taking no medications, and was current with his tetanus immunization.

On physical examination, the patient's vital signs were normal. The emergency physician (EP) documented a vertical laceration of the mid-left forearm on the dorsal aspect, measuring 6 x 2 cm. The wound edges could be easily approximated. The distal motor and sensory exams were normal.

The EP anesthetized the area with local infiltration using 1% plain xylocaine. The EP then picked up a bottle of CaviCide that had been sitting on the counter and sprayed it on the patient's wound. The patient immediately complained of burning pain, but the EP continued to spray the wound before suturing it closed with 4.0 nylon.

The patient, however, stated the pain was unbearable. He showed the ED manager the bottle of CaviCide and asked if it was an appropriate sterilizing solution for wounds. When informed it was not, the patient demanded the sutures be removed and the wound re-opened and irrigated with an appropriate solution. The EP re-opened the wound, irrigated it with sterile normal saline, and closed it once again using 4.0 nylon. The EP apologized to the patient, admitted that he made a mistake, and discharged the patient home with instructions to have the sutures removed in 10 days.

The patient developed severe pain at the site a few hours later, prompting him to go to a different ED. They applied lidocaine gel to the area and recommended ibuprofen by mouth for pain. The patient was discharged home.

The patient sued the EP, the nurse, and the hospital for negligence. The plaintiff alleged that under no circumstances should CaviCide be used on humans. The plaintiff's EM expert testified that the error represented gross negligence. The hospital admitted the nurse violated the standard of care for not properly storing the CaviCide. The EP expert for the defense argued the patient did not suffer any new injury or pain, and that his symptoms were due to the laceration. A second defense expert (toxicology) explained that CaviCide is not toxic and that it would only cause short-term irritation. The plaintiff's counsel asked for \$172,800 in damages, explaining that he was requesting \$1 per second for the time the patient experienced intense pain. After deliberating for five hours, the jury found in favor of the defense.

DISCUSSION

Over the years, I have seen variations of this case: hemocult solution placed in the eye under the impression it was a topical anesthetic, and 1:1000 epinephrine given intravenously (IV) when it was thought to be 1:10,000 concentration.

The way to avoid this mistake is to force yourself to take a good look at whatever medication you are administering to a patient, be it by mouth or IV, on the eye or skin, in a

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muscle, or up the rectum. Read the name of the medication before giving it. It is fortunate for all involved in this case that no serious or permanent injury occurred.

According to the manufacturer of CaviCide (Metrex), it is a “convenient, ready-to-use, intermediate-level surface disinfectant which is effective against tuberculosis, HBV, HCV, viruses (hydrophilic and lipophilic), bacteria (including MRSA and VRE), and fungi. It is safe for use on non-porous surfaces, and for cleaning environmental and medical device surfaces.” While it sounds great for cleaning surfaces and objects, it is clearly not the right product to spray on a wound.

This accident falls under the general heading of a medication error. This category includes: selecting the wrong medication or dosage; giving the medication at the wrong frequency; administration to the wrong patient or via the wrong route; or failure to monitor the patients’ response to the medication. In the risk management world, it is recommended that providers consistently perform the “five rights” of medication administration: right patient; right drug; right dosage; right time; and right route. This case illustrates the problem of “right drug.” Clearly, CaviCide was not the right drug for this patient. Given different circumstances, the harm could have been significant.

Summary

Fortunately, this is a relatively simple take-home message: know what drug you are giving your patient, always.