

Commentary by Francis L. Counselman, MD, Associate Editor-In-Chief | Neal E. Flomenbaum, MD, Editor-In-Chief

Methadone Ingestion in a Pediatric Patient

A 2-year-old boy in Alabama accidentally ingested a 5-mg methadone pill that had been prescribed to his aunt to alleviate pain related to sickle-cell anemia. At approximately 10:30 PM, Poison Control was called, and the toddler was taken to the closest hospital. The family arrived around 11:00 PM and told the ED triage unit that the boy might have ingested a methadone pill. A nurse found no abnormal heart or breath sounds. The child's aunt and uncle and the ED nurse agreed that the boy's condition seemed normal.

Around 11:30 PM, Dr. J ordered charcoal to be orally administered. The charcoal was mixed with chocolate milk, but the boy refused to drink it through a straw. The nurse administered two oral syringes of the mixture, and the aunt and uncle administered a third syringe. This took about an hour and resulted in the child consuming more than three-quarters of the solution.

The child's vital signs remained normal over the next few hours. At some point, the child fell asleep. No other medications were administered, no laboratory tests were ordered, and no cardiac monitoring was performed.

At approximately 2:30 AM, Dr. J awoke the boy and had him walk down a hallway in the ED. Records indicated that he walked independently and was under no acute distress. The family, however, claimed that the boy was crying and groggy and could not walk well.

Dr. J later ordered the child discharged, noting no signs of methadone ingestion. The nurse said that the child was walking, waving, and smiling at the time. However, the aunt and uncle said they carried him home, where he was placed in bed with his uncle. Some time between 5:00 AM and 5:30 AM, the child vomited in his sleep.

When his aunt checked on him at 5:30 AM, she found him unresponsive and not breathing. A call to 911 was made, and CPR was begun. When paramedics arrived, the child had no pulse and had not been breathing for about 10 minutes. The paramedics continued resuscitation efforts and transported the child to an ED.

On arrival at 5:55 AM, the child was intubated and treated with epinephrine, atropine, and bicarbonate.

His pulse was restored, but he coded moments later. He was successfully defibrillated, and his aunt and uncle were informed that he required transfer to pediatric intensive care at a children's hospital. It was expected that he would be brain damaged as a result of hypoxia.

After transfer by life flight, the child remained unresponsive and profoundly brain damaged. He died that afternoon. The plaintiff claimed that more testing should have been performed when the child was initially brought to the hospital and also claimed that the child was prematurely discharged.

Outcome

According to published reports, a \$2.5 million verdict was returned.

Comment

This is a sad case for everyone involved, because the death was most likely preventable. First, we as emergency physicians should have a low threshold for consulting our local Poison Control Center, especially when confronted with an ingestion or overdose of an unfamiliar drug.

Methadone acts on the mu-opioid receptors, just like morphine, but its chemical composition is different. Its onset is slower and course of action more prolonged than morphine. The half-life of methadone is quite variable, ranging from eight to 59 hours. This is in part due to its high lipid solubility.

For all of these reasons, it would have been more appropriate to admit this child to an inpatient bed for monitored observation, or keep him in an ED observation unit, if available. In either case, this patient required continuous cardiac and pulse oximetry monitoring and intravenous access. Keeping a vial of nalaxone close by would have been prudent as well. **FLC**

Missed Diagnosis of Stroke

A 56-year-old Maryland man went to his primary care physician in January 2005 with weakness, numbness, and tingling in his right arm. The physician believed the patient was experiencing stroke-like symptoms and sent him to a local ED for testing. The physician faxed

the patient's medical record to the ED while the patient's wife drove the man to the hospital.

When they arrived at the ED, the patient's wife attempted to give hospital employees the physician's orders for tests and share his concern about a stroke, but she was told that all the beds were full and that she should sit down and wait. The man was eventually seen but was evaluated as a low-priority patient with numbness in his right hand.

The patient was examined by Dr. R, who ordered x-rays of the right wrist. The plaintiff was discharged with a diagnosis of carpal tunnel syndrome. Twenty minutes later, a nurse left a message for the patient asking him to return to the hospital for stroke-related tests as ordered by the primary care physician. He returned, and another emergency physician performed the requested tests, with the exception of a test to check blood flow to the brain.

This physician diagnosed stroke-like symptoms and requested a consultation with another physician. The consultation never happened, and the patient was discharged about six hours after the first discharge. The plaintiff had a stroke about 16 hours later.

Testing after this found obstruction in the left carotid artery. The man sustained permanent neurologic injury. The defendants all denied negligence and disputed the extent of the plaintiff's injuries.

Outcome

According to a published account, a \$1,123,000 verdict was returned. This included \$750,000 for pain and suffering, which will be capped at \$650,000 under state law.

Comment

This case emphasizes the critical importance of communication. This includes communication between emergency physicians and referring physicians (in this case, the primary care provider); emergency physicians and their patients; and emergency physicians and their consultants. It is unclear if the primary care provider called and spoke with the emergency physician about his patient. If a physician is referring a patient to the ED

for evaluation, there should be a call and conversation with the emergency physician—that is simple courtesy, and good medicine.

Secondly, it does not appear the initial emergency physician heard the concerns of the patient regarding a possible stroke; instead, the focus was isolated on the wrist. Finally, the second emergency physician attempted to consult another physician for “stroke-like symptoms,” but for reasons that are unclear, this never occurred.

In the ED, we serve as advocates for our patients. If we feel a consultation is necessary, we need to ensure it occurs. If the appropriate communication had occurred at any one of these three junctures, it is possible a better outcome would have been achieved. **FLC**

Epinephrine Administered Intravenously Instead of Subcutaneously

A woman in her 40s went to an ED in California in April 2006 with complaints of a rash. She was seen by emergency physician Dr. H, who ordered the administration of intravenous diphenhydramine and dexamethasone, subcutaneous epinephrine, and oral ranitidine.

Nurse M administered the diphenhydramine and dexamethasone, then began giving the epinephrine intravenously instead of subcutaneously. As soon as the epinephrine IV began, the patient reported feeling strange. The nurse stopped the epinephrine IV after administering approximately 0.1 mg and noted her error.

The patient reported feeling dizzy with a racing heart, and she was placed on oxygen and heart monitors. The nurse instructed a paramedic trainee to get Dr. H. The patient was kept overnight for observation in the cardiac intensive care unit.

The plaintiff alleged negligence in the misadministration of the epinephrine. She maintained that she had suffered permanent heart damage from the incident, with rapid heartbeat and fatigue.

The defendant claimed that the plaintiff had not suffered any damage, as she had not lost consciousness and did not complain of chest pain or shortness of breath, and the appropriate response was made to the error. The plaintiff had undergone numerous tests

since the incident, which all indicated a normal heart and rhythm.

Outcome

According to a published account, a defense verdict was returned. Post-trial motions were pending.

Comment

With the possible exception of the plaintiff's attorney, everyone involved with this case was lucky: the plaintiff for apparently not suffering a cerebrovascular accident or significant heart damage, and the nurse, physician, and hospital for receiving a defense verdict.

A high percentage of all medical errors involve medication errors. Contributing to such errors are the transition to EMRs, the explosion of new prescription medications available, and the ever-increasing ED patient volume. The almost constant shortages of the meds we rely on most and need most quickly, including shortages of unit doses and prefilled syringes, further increase the likelihood of dosing errors. Super vigilance, as well as not "multitasking" while ordering meds, will reduce the likelihood of both errors and consequent lawsuits. **NF**

Man Claims Injury From Use of Restraints

A man claimed that he was prevented from leaving an ED in Colorado in April 2007 and was eventually restrained. He claimed negligence in failing to allow

him to leave and for the injuries received during the restraint process.

The plaintiff alleged that he suffered a fracture of the right wrist and a right rotator cuff tear. The defendants claimed that the plaintiff was not competent to leave and was restrained only after he began fighting with the ED personnel. The defendants also disputed that the plaintiff suffered injury from the restraint.

Outcome

According to published reports, a defense verdict was returned.

Comment

When a physician is convinced that a patient does not have capacity to make decisions and should not be allowed to leave the ED against medical advice, a jury will usually understand the need to restrain such a patient and will side with the physician. Although the expression "damned if you do, damned if you don't" may come to mind, too often such problem patients are allowed to leave when they shouldn't be; in those instances, the physician may later be named in a malpractice suit brought by the patient's surviving relatives. **NF**

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