

Part One

Medical and Treatment Errors

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Coming Up for Air



When equipment failure can be fatal

Barney had been vomiting for 2 days, but this was not usual. Mr. and Mrs. Thompson explained that Barney vomits about once a day, so they were originally not that worried about the vomiting. When Barney failed to stop vomiting and refused his dinner, they knew it was time to get him checked out. Dr. Crane was working emergency that night, and the clinic had been slow to that point in time. Compared with many 4-year-old domestic shorthair cats that Dr. Crane had seen, Barney was clearly overweight but his vital signs were normal. Barney was a bit quiet and somewhat dehydrated, and Dr. Crane suspected that Barney's abdomen was a bit uncomfortable; however, no clear abnormalities were noted on abdominal palpation. If not for the complete oral exam, Dr. Crane might not have found the string trapped under the base of the tongue.

A presurgical workup was quickly completed, and Barney was given intravenous fluids and antibiotics. Plication of the small intestines was suspected based on abdominal radiograph, and Dr. Murray was called in to perform the surgery so Dr. Crane could continue to manage the evening's slowly increasing emergency caseload. Anesthesia induction was smooth, Dr. Murray quickly found the plicated region of the small intestinal track, and the entire string was removed with only three enterotomies. Surgery was completed without any complications, and Barney was returned to the intensive care unit for anesthesia recovery

and ongoing care. Postoperative point-of-care testing identified mild hypokalemia, and Barney was still mildly dehydrated so intravenous fluids were prescribed. Louise, the technician working at the emergency clinic that night, was busy with other cases, so Dr. Murray added potassium to the fluids, labeled the bag, then inserted the fluid administration set. When Louise was free to help, Dr. Murray left to telephone Mr. and Mrs. Thompson with the surgical findings and the postsurgical plans, including the recommendation that Barney stay a night or two for ongoing supportive care.

The technician started the fluids, and a few minutes later, Barney collapsed, stopped breathing, and had no pulse. Cardiopulmonary resuscitation (CPR) was initiated, and Barney was immediately intubated and external cardiac compressions were begun; CPR was continued for 15 minutes until bloody edema fluid was seen pouring from the endotracheal tube without any evidence of any response to CPR.

Resuscitative efforts were unsuccessful, and Dr. Murray returned to the phone to advise the Thompsons of the catastrophic development. The Thompsons could not understand how Barney could have survived the surgery, and how they could have been given such an optimistic postoperative update, only to be called 15 minutes later with notification of Barney's death.

The individuals involved reviewed the case to determine what might have happened. Iatrogenic hyperkalemia was entertained as a possibility, but Dr. Murray was certain she had added the correct amount of potassium to the fluid bag. Neither Dr. Murray nor Louise could recall purging the intravenous fluid line of air, and this was a point in transfer of care between two individuals on the health-delivery team. Heart disease was considered as a possible complicating factor because of the bloody fluid noted from the endotracheal tube; however, no cardiac abnormalities had been noted on exam, there were no abnormalities on the electrocardiogram during anesthesia monitoring, and Barney was not short of breath just prior to the cardiopulmonary arrest. It was suspected that the intravenous fluid line had not been purged of air prior to the infusion pump being started and the cat had therefore received an intravenous air bolus of approximately 15–18 mL. A post-mortem thoracic radiograph confirmed air in the right atrium.

The Thompsons called the next day and filed a complaint with the hospital director. After meeting with the director and Dr. Murray, the Thompsons had a better understanding about the events and, although they had lost their pet, they appreciated the full disclosure, honesty, and obvious remorse shown by Dr. Murray during this face-to-face conversation.

Key Points

- The diagnosis was not delayed, in part due to Dr. Crane's thorough examination. If the string under the tongue had been missed, diagnosis might have been delayed and peritonitis could have been a complicating outcome.
- In this case, a simple technical error cost Barney's life. This highlights the recommendations of having a simple procedural check-off, such as all fluid sets being checked for air by the person connecting them to the patient, especially due to the more widespread use of fluid pumps. The point in time where there is a transfer of duties from one individual to another is a key situation where mistakes are especially likely to happen; communication between team members regarding what has been done and what still needs to be done is essential.
- Catastrophic and unexpected developments are difficult for most clients to accept, especially when such events are in direct contrast to a recent communication. Clinicians have individual preferences in how to approach these situations, but honesty about the events is always best. Some clinicians start the conversation with "I have some very sad news about Barney," while others might approach it with a longer version culminating with the loss of Barney. The trajectory of the conversation will vary from case to case, but most owners want to hear specific information about what transpired just prior to and at the time of the crisis. In many cases, the unexpected nature of the event and the grief associated with loss of the pet means that the subject of charges for care is best avoided in this first conversation, unless it is brought up by the owner. Some owners need time to accept this information, and a subsequent conversation is required to determine disposition of the body, whether or not to perform a necropsy, and other details. Financial decisions should be made by the hospital owner or practice manager, in consultation with their liability insurance carrier.
- Meeting personally with all parties involved allowed this case to be resolved in a professional manner, and it allowed the Thompsons to fully express their concerns. In addition, Dr. Murray was able to explain the situation and express his true remorse about the outcome. In this case, the Thompsons were not charged for any of the hospital services, and they left knowing that the doctors and administrators truly cared for their cat and were very sorry about what had transpired.