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5-5-09

Lisa Taylor-Austin
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I am a board-certified veterinary anesthesiologist (ACVA), internist (ACVIM), and criticalist (ACVECC). I was requested by the owner, Lisa Taylor-Austin, to review the veterinary records for her 13-year-old spayed female Domestic Short Hair cat named "Simba". I began with the records prior to presentation at Silver Sands Veterinary Center which included an office visit and vaccinations dated 6/14/03; and examination, bloodwork, and dental prophylaxis on 4/14/06. Then, I evaluated records associated with Silver Sands Veterinary Center, including bloodwork, diagnostic evaluation, anesthesia, surgery, post-surgery hospitalization, and communications during the time from December 15, 2008 through January 4, 2009 were reviewed. On January 5, 2009, Simba was transferred to Norwalk VCA to investigate the presence of anemia and azotemia (elevated creatinine concentration). **Creatinine is an enzyme associated with kidney function.**

My comments / observations are as follows:

1. The records that I reviewed did not clearly elucidate the oral procedures performed, therefore, I can not comment on adequacy of the analgesia provided. If indeed, there was deep cleaning of the tooth roots and/or extractions and the need for suture placement, I would expect a moderate amount of pain. That a moderate amount of pain was expected is supported by the discharge instructions

which included the need to blenderize all food and to use cold and then warm compresses to the surgery site for a total of three days.

Two injections are listed under "analgesic" on the anesthetic record, one at 3:00PM administered IM (intramuscularly), the second injection at 3:05, route of administration not provided. Both drug names are abbreviated, I do not know if the first is buprenorphine; the second is most likely buprenorphine, an opioid that has been shown to be effective in cats. I would not expect two injections of buprenorphine administered AFTER the painful procedure to provide adequate analgesia long-term. Simba was discharged the evening of the procedure.

2. Pain medication sent home for Simba was gabapentin. Gabapentin has been identified as an effective medication to treat pain that fails to respond to more conventional therapy such as opioids (ie. buprenorphine) and nonsteroidal anti-inflammatory agents (ie. Meloxicam); it has been recommended for chronic and neuropathic pain not for acute post-operative pain. Simba was in the acute phase of pain following the invasive oral procedure(s).
3. Preoperative bloodwork revealed a mild-to-moderately elevated value for amylase, an enzyme associated with the pancreas. While pancreatitis is difficult to diagnose and a single enzyme elevation is not pathognomonic for the disease, this elevation was not commented on in the records. Also, the elevated cholesterol value was not commented on in the records.
4. The anesthesia record was somewhat complete including preoperative medication, delivered isoflurane concentration throughout the procedure and vital signs including heart rate, respiratory rate, and systolic blood pressure. However, the following observations were made:
    a. There were only two recordings within the first hour of general anesthesia for oxygen saturation of hemoglobin (SpO_2), both were 100%. It is possible that the signal was lost during the period of hypotension (see comment c below) but no additional values were recorded. **[SpO2 values provide a noninvasive method of assessing the adequacy of oxygenation and blood flow to peripheral tissues; absence of recordings on the anesthetic record suggest that an adequate signal for measurement was absent for the period when values were not recorded].**
    b. Time of administration for induction agents and premedication, including diazepam (val) and ketamine (ket) and atropine, respectively, was not recorded. Route of administration for atropine was not recorded.
    c. Beginning at 1:45PM on the anesthetic record, a period of unknown or low systolic blood pressure (hypotension) was recorded. This persisted for a period of 20-25 minutes. At 2:10PM, a bolus of hetastarch (a colloid which expands vascular volume) was administered which effectively increased systolic blood pressure to normal limits within 5 minutes (according to the record, hypotension was present for 20-30 minutes). **[Hypotension is defined as abnormally low blood pressure; normal systolic blood pressure is 100-140 mm Hg and there is concern when**

this value decreases below 100 mm Hg: reference = Lumb & Jones' Veterinary Anesthesia and Analgesia, 4th ed, pg. 546. Hypotension results in inadequate blood flow and oxygen delivery to organs and is one cause of organ dysfunction/failure.]
The period of hypotension during the anesthetic period may have predisposed Simba to development of pancreatitis and renal failure that was ultimately identified in January 2009. There is no blood work available between the date of surgery (12/16/08) and January 4, 2009 to provide information as to progression/presence of these problems.

d. Analgesic agents were administered at 3PM and 3:05PM on the day of anesthesia and surgery. It is not clear what the first injection was but was given IM (intramuscularly), the second injection was likely buprenorphine (bupr) but route of administration was not recorded. It is common with invasive dental procedures for local anesthesia to be provided prior to the painful stimulus to prevent central sensitization of nociceptive neurons believed to be mediated by (activation of) the N-methyl-D-aspartate (NMDA) receptor. It is activation of this receptor that is involved in the hyperalgesic response (excessive pain response) to tissue injury and inflammation. No presurgical analgesic medication was recorded in the records, except for ketamine which is an antagonist of the NMDA receptor. However, for this action of ketamine to be effective in preventing hyperalgesia, a CRI (constant rate infusion) is what is reported in the literature.
[Dental procedures such as extraction and deep cleaning are painful. There is no suggestion in the anesthetic record that medications were administered prior to the procedure that would prevent input of a painful stimulus to the central nervous system. This input of pain creates the potential for exacerbation of pain if not adequately managed postoperatively. There is no evidence in the record that pre-procedure analgesia was provided and minimal evidence that adequate pain management was provided following the dental procedures.]

e. Total intravenous fluid quantity administered was not recorded on the anesthetic record. Recommended perianesthetic fluid rate for crystalloid fluids (such as Lactated Ringers solution) is 10 ml/kg/hr.**[reference = Lumb & Jones' Veterinary Anesthesia and Analgesia, 4th ed, pg. 708.** A rate is not listed on the anesthetic record. Calculating for Simba's weight and duration of anesthesia (2 hrs and 20 minutes), the amount administered should have been approximately 110 ml. In cats, it is prudent to be conservative due to a relatively small plasma volume in relation to their size. Because a total volume is not provided on the anesthetic record, appropriateness of fluid therapy can not be assessed.

f. The procedure is listed as oral dx. It seems apparent that a procedure was performed considering the duration of general anesthesia (2.33 hours).

5. Based on preoperative blood work, there was an indication (elevated amylase concentration) that there might be abnormalities associated with the pancreas. Yet when Simba was readmitted (the date is not clear on the hospital records, but somewhere around 12/18/08-12/19/08), only supportive therapy, including fluids, gastrointestinal protectants, antibiotics, and analgesic agents, was administered. Blood work was not performed (at least according to the provided records) during the extended hospitalization period until 1/4/09. At that time, blood work (which did not include amylase concentration despite an elevated value prior to the anesthetic period) revealed an elevated creatinine value and anemia.
6. Based on the records, no diagnostic procedures were performed to investigate the cause of Simba's continued poor appetite. If it was assumed that the analgesic therapy was adequate, why did "Simba" continue to only eat following a diazepam injection? Why was it assumed that the cat was normal other than not "liking" the food or having anxiety associated with hospitalization?
7. An approximate 30 minute period of hypotension occurred during the anesthetic period. This duration may have predisposed development of pancreatitis and renal failure (that was diagnosed after 1/4/09) due to ischemic insult of the organs. No effort was made to diagnose the inappetance and the assumption was made that it was due to pain and hospitalization stress. Additionally, there are no records that suggest how Simba's water and food intake were monitored during the period of hospitalization prior to referral on 1/4/09. Animals that exhibit a poor appetite and that require intravenous fluid therapy, need to be monitored by daily weight assessment, electrolyte balance, and renal function. There is no evidence that any parameter was recorded during this time.

Dr. DeForge presented himself a specialist of an AVMA-recognized specialty college in the records of the Connecticut VMA. According to the AVMA directory of recognized specialists, this is not true.

The records do not clearly elucidate the oral procedures performed. Despite the period of hypotension during the anesthetic period, no diagnostic tests were performed to determine if the lack of appetite might be related to organ dysfunction rather than oral pain only. Eighteen days of eating poorly is quite inappropriate for cats. Feline species can develop "fatty liver" and hepatic dysfunction associated with anorexia for a prolonged period of time. Records from Silver Sands Veterinary Center (12/15/08: recorded weight = 10 lbs 6 oz) and from Norwalk VCA (1/5/09: recorded weight = 9 lbs 10 oz) show a net weight loss of 12 ounces over 21 days. There does not appear to be any indication that "Simba's" weight was monitored to assure adequate caloric intake and thus prevent weight loss during the period of hospitalization at Silver Sands Veterinary Center during December 2008.

Signature: Tanya Seahorn

Date: 5-7-09

Notary Signature: Kathy C Gross

Date: 5-7-09

State of Kentucky
County of Scott
Subscribed and sworn to before me by Tanya Seahorn this 7th day of May, 2009.
Kathy C Gross, Notary Public
My Comm Expires: 8-24-2012

Disclaimer:

“Lisa Taylor-Austin believes there was merit to her claims that Dr. Deforge negligently cared for her cat, Simba, and that he misrepresented whether he was a Board-certified dental specialist. Dr. Deforge denies these claims and asserts that the Department of Public Health’s veterinary board cleared him of any wrong doing. However, Dr Deforge agreed to pay $7,500.00 to compensate Ms. Taylor-Austin because he believed the risks inherent in any lawsuit and the cost of missing two weeks from his practice made it imprudent to go to trial.”

Note: My guardian’s costs for my medical care and all legal avenues exceeded $20,000.