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## Trauma on a Fishing Trip

**Heather Towle, DVM**

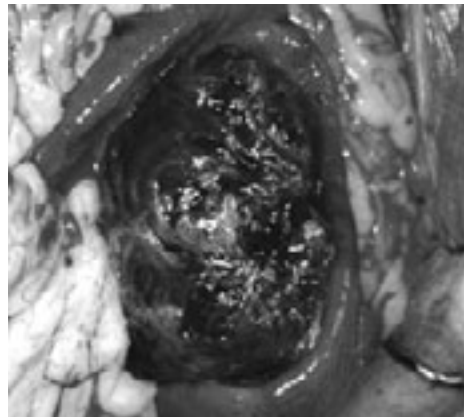
In early September, "Sutter" a 10 year old male neutered Labrador Retriever was presented to VetCare Emergency Service for evaluation after being hit by a car while on a fishing trip with his owner. Upon presentation, Dr. Amie Csizer noted that Sutter was showing clinical signs of shock (tachypnea, tachycardia with pale mucus membranes and weak femoral pulses). His abdomen was extremely tense upon palpation. No neurologic or orthopedic abnormalities were detected.

Initial bloodwork included PCV/TP=45%/6.0mg/dL, ALP 218 IU/L (RR 10-140), ALT >1000 mg/dl (RR 10-120). Systolic blood pressure was 90 mmHg. Sutter was volume resuscitated with intravenous LRS and Hetastarch at a shock rate with fluid modification every 30-60 minutes thereafter based on evaluation of vital signs.

Initial thoracic radiographs were within normal limits, and abdominal radiographs documented a slight decrease in detail. Hydromorphone at 0.1 mg/kg was given for analgesia. After four hours of presentation, repeat PCV/TP was 27%/4.0mg/dL, and Sutter remained tachycardic and tachypneic. A fluid wave was suspected. Aduominocentesis yielded non-clotting blood with a PCV/TP of 24%/3.5mg/dL.

Sutter was diagnosed with a hemoabdomen secondary to his vehicular trauma. Aggressive medical management was continued, and an abdominal wrap was placed. After an additional two hours, peripheral PCV/TP declined to 19%/3.8mg/dL, and Sutter was deemed to have failed medical management. He was transferred immediately to Dr. Heather Towle for surgery. A packed red blood cell transfusion was administered just after induction of anesthesia.

During surgery, an exploratory abdominal approach was made from xiphoid to pubis. A hemorrhaging mass on the head of the spleen with omental adhesions was visualized. A splenectomy



**Splenic mass**

was immediately performed using the LDS stapling gun. The abdomen was lavaged and suctioned. A mild hepatic fracture that was not hemorrhaging was noted. No evidence of metastasis was identified. Routine surgical closure and recovery.

Sutter initially recovered well, and his PCV/TP was holding steady at 26%/4.0mg/dL. Approximately 14 hours post-operatively, Sutter appeared less responsive, and his PCV/TP dropped to 16%/3.5mg/dL. Abdominal and thoracic ultrasound were performed to search for sources of hemorrhage, and none were found. Rectal examination was normal. Clotting times were normal. Sutter was cross-matched and given a second packed red blood cell transfusion. A grave prognosis was given to his owners.

At this time, an internal medicine consultation from Dr. Barry Kipperman was obtained, and self-limiting hemolysis was suspected. Sutter was aggressively monitored (urine output, blood pressure, pulse oximetry, ECG,

serial PCV/TP, fluid and pain management, antibiotics, gastroprotectants). Over the next two days, Sutter gradually improved, and his PCV/TP continually increased.

Histopathology of the spleen was focal hematoma with extramedullary hematopoiesis. No signs of cancer were found. Recheck one week post-operatively showed progressive improvement in strength and appetite. PCV/TP was 29%/4.8mg/dL.

Hemoabdomen secondary to trauma can often be managed medically and very few patients require surgical attention. Due to the omental adhesions found during surgery, it was believed that the splenic mass pre-existed prior to the traumatic event. As with any splenic mass, it is important to review histopathology results before making prognostic or intra-operative decisions.

This case typifies the synergy between our emergency, surgical, and internal medicine services each contributing to Sutter's successful outcome. Thanks to Dr. Dossey and Town and Country for the referral. Sutter has returned to his fishing activities with his owner!



**Sutter**

# VetCare and Veterinary Surgical Centers of the Delta Sponsor CE for Technicians

On August 3, VetCare & VSCD with the support of Mike Volpe from the Butler Company hosted a RACE approved continued education event for veterinary technicians & assistants. Harold Davis, BA, RVT, VTS spoke on “The Nursing Process in Critical Care and Emergency Patients.” We were pleased to have 50 participants in a Friday night class. Mr. Davis provided a case driven interactive session focusing on:

1. A HBC patient,
2. a patient that had FLUTD with obstruction,
3. a patient with Diabetic Ketoacidosis.

Mr. Davis showed how using the nursing process to approach patient care, nurses could become more proactive members of the team.

Mr. Davis presented the nursing process as used in “human” medicine which requires that nurses move through four phases in caring for their patients: The Assessment, Planning, Implementation, and Evaluation. He encouraged technicians to become skilled at performing physical examinations to establish a baseline for comparison in evaluating ongoing nursing or medical intervention. He clearly points out that the technicians focus is not on trying to make definitive diagnosis, to prescribe therapy or make a prognosis. Instead it is helpful for technicians to have these judgments in order to anticipate the needs of the patient and / or veterinarian. Additionally, making these judgments will allow the technician to consider possible nursing interventions.

## Planning

The “Planning” phase of the nursing process helps the nurse to organize, prioritize and contemplate actual and potential problems or risks to the patient. This is important to insuring that the doctor’s orders for the patient are

carried out effectively and efficiently. It helps the technician to work collaboratively with the veterinarian as the patient’s condition and needs change by thinking about the disease processes and potential risk factors associated with them.

## Implementation

In the “Implementation” phase the nurse’s job is to help the doctor carry out procedures or perform diagnostics tests or provide therapies and care outlined by the doctor. This requires that the technician have the knowledge and skill set to perform these tasks competently.

## Evaluation

Finally, during the “Evaluation” phase the nurse is re-examining the patient to help assess whether the patient is improving, and thinking about if the patient is not improving, why not. Mr.

Davis provided an example of a patient that was 24 hour post-op and had developed a sinus tachycardia (160 bpm). In this example the tachycardia was documented, the clinician alerted and, he suggests that the technician should have developed a list of possible causes: hypoxia, hypotension, hypovolemia, excitement, fever, pain, recent drug administration. He suggested that the technician when notifying the doctor of the tachycardia should also inform the doctor that he/she was able to rule in or out potential causes (including the technicians supportive information).

Mr. Davis feels that this process should not cause any delay in the delivery of necessary medical treatments by the veterinarian. Ultimately, the goal of nurses utilizing this process is to enhance the care that is given to the patient and allow them to be a stronger contributor to the health care team.

## VetCare Doctor Profile

Dr. Amanda Edwards is a native Californian and was fortunate to spend many of her formative years in the Washington D.C. metropolitan area. She earned her bachelors of science in Zoology from San Diego State University and worked as a registered nurse for animals for several years before entering veterinary school. She earned her veterinary medicine degree from Western University, located in southern California.

Her professional interests are geriatrics, exotic animals and internal medicine. Currently, she is undertaking an internship in internal medicine and surgery here at Vet Care. In her free time, she spends time



with her three legged cats, Tao and Princess Buttercup, and her beloved Macaw, Pablito. Aside from animals, her passions are surfing, hiking, traveling, anything outdoors, spending time with friends and family and cooking a wide array of cuisines.

## VetCare Doctor Profiles



**Heather A. Towle, DVM**

Dr. Heather Towle graduated from Purdue University School of Veterinary Medicine in 2003 with her Doctor of Veterinary Medicine Degree. She was subsequently accepted into the University of Illinois Small Animal Medicine and Surgery Rotating Internship program. Upon completion, she returned to Purdue University to complete a

Small Animal Surgical Residency.

Dr. Towle's research interests include congenital orthopedic deformities and joint mobility enhancing diets. She has publications in the *Veterinary Orthopedic and Traumatology Journal*, *Journal of the American Veterinary Medical Association*, *Veterinary Surgery Journal*, and *Journal of Small Animal Practice*. Dr. Towle has been awarded the Purdue University Veterinary Teaching Award of 2007 and the Veterinary Orthopedic Society Surgeon-in-Training Award. Her clinical surgery interests include thoracic surgery, angular limb deformities, and soft tissue reconstruction surgery.

Dr. Towle's hobbies include running, walking with her energy-filled Golden Retriever, and reading. She shares her life with her beloved Golden named Alexis and her kitty named Bug.



**Amie B. Csiszer, DVM**

Dr. Amie Csiszer has returned to California after residing on the East coast for a number of years. She graduated Magna Cum Laude from Union College in New York with a B.A. in Anthropology, a B.S. in Biology, and being inducted into the Phi Beta Kappa honor society. In 2006, she received her Doctorate in Veterinary Medicine from Tufts University School of Veterinary Medicine. During her veterinary edu-

cation, she trained extensively in small animal physical rehabilitation with New England Physical Therapy for Animals. From 2006 to 2007, Dr. Csiszer completed a rotating internship at Bay Area Veterinary Specialists with a focus in small animal surgery.

Dr. Csiszer is pleased to be joining Veterinary Surgical Centers of the Delta for a year of surgical internship. Her clinical interests include orthopedic surgery, physical rehabilitation as adjunct treatment for orthopedic and neurologic disease, and oncologic surgery. She plans to continue her training in small animal surgery with a residency position following the completion of her internship.

When not hard at work, Dr. Csiszer is happy exploring her new home in the Bay Area. She enjoys taking road trips, running, and seeking out tasty local cuisine. Her cat Luceius traveled with her from New England and is usually either snuggling or getting into trouble.

## VetCare's Ongoing Continuing Education Opportunities

VetCare makes every effort to promote continuing education (CE). We appreciate having the opportunity to provide monthly CE opportunities for our nursing team and community veterinarians.

### Nursing Classes

**February 19<sup>th</sup>**

**Anesthesia and Ventilators**

Taught by Dr. Kris Kruse-Elliot  
for nurses

**March**

**Hematology**

Taught by Claudia Thatcher, BS, RVT  
for nurses

### Medical Rounds for Doctors

**February 7<sup>th</sup>**

**Brain Disease**

Presented by Dr Barry Kipperman

**March 6<sup>th</sup>**

**Canine Hypoalbuminemia**

Presented by Dr Barry Kipperman

Medical Rounds are held at VetCare from 12:30-2:00pm. Lunch is always provided. Doctors can RSVP to Victoria at VetCare if they would like to attend medical rounds.

Nursing classes are primarily for in house training purposes. We may be willing to accommodate a few extras if someone expresses interest in attending.

**925-556-1234**



7660 Amador Valley Blvd  
Dublin, CA 94568

Phone: 925-556-1234  
Fax: 925-556-1229  
Email: [shvetcare@yahoo.com](mailto:shvetcare@yahoo.com)  
Web: [www.EmergencyVetCare.com](http://www.EmergencyVetCare.com)

Barry Kipperman, DVM, DACVIM  
River May, DVM  
Cheryl Ramos, DVM  
Britta Revels, DVM  
Amanda Edwards, DVM

John J. Haburjak, DVM, DACVS  
Gregory S. Marsolais, DVM, MS, DACVS  
Kimberly R. Carlson, DVM  
Heather Towle, DVM  
Amie Csiszer, DVM