# Anesthesia/Analgesia

## Heather D. Medeiros, BS, CVT, CCRP, VTS (Anesthesia and Analgesia)

#### The Ins and Outs of The Anesthesia Machine

This talk will describe the four basic anesthesia machine system and the function and purpose of all components including masks, and chambers. The importance of proper set up and the flow of oxygen through the anesthesia machine and both rebreathing and nonrebreathing systems will be discussed. Differences in flow rates, advantages, disadvantage, and indication of use will be touched upon. The different oxygen supply of an anesthesia machine, including safety concerns with compressed gas cylinders will be discussed. Insight into how flow rates directly influences anesthetic concentration, changes in depth, patient safety and waste anesthesia gas production will be given. Proper leak checking and the importance of anesthesia machine maintenance and service will be highlighted.

### Anesthetic Problems and Emergencies: A Technicians Role

This talk will cover common reasons why anesthetic emergencies occur, including increased patent risk, human error, and equipment failure. Attendees will learn the different anesthetic requirements and problems between pediatric, geriatric, obese, brachycephalic, and patients with various diseases. Causes and proper response to inadequate or excessive anesthetic depth, and changes in vital parameters will be touched upon. Attendees will learn some of the more common problems that arise in the recovery period and the appropriate actions that can be taken to prevent or treat these problems.

#### **Behavior**

#### Katenna Jones, ScM, ACAAB, CCBC, CDBC, CPDT-KA, Certified Fear Free

#### Fear Free Exams: Tips for Greeting, Interacting With and Examining Pets

The concept of "fear free" is becoming more and more accepted as the "ideal standard" when providing veterinary care. In this session, learn how to make patients more comfortable, and therefor safer, during routine exams. Discover how to make simple modifications to not only the room, but also to the way you move, talk, and behave. Some content will be immediately and easily applicable, while some will require more of an effort, but all will make life better for pets and pros alike,

#### **Dealing with Feline Elimination**

The veterinary clinic is often a pet owner's first opportunity to get solid information to help in addressing their cat's urination or defecation outside of the litter box. This session will ensure that the owners you interact with are getting the most up to date, applicable, and effective information. You are invited to confirm your existing knowledge, discover this information for the very first time, or pick up tiny information nuggets to implement in your own professional (and personal!) lives.

#### Fear, Phobia, and Anxiety

Fear, phobia, and anxiety are normal behaviors that occur in most animals, and our companion cats and dogs are no exception. These behaviors become problematic, however, when they start to manifest with increasing intensity, frequency, or duration. Unfortunately, many pet professionals are noticing that these behaviors are becoming more and more common and more and more severe. This is why it's essential that those who live or work with anxious, fearful, or phobic pets understand what these behaviors mean, how they develop, and how one might be able to help these pets finally get some relief.

# **Emergency/Critical Care**

### Meghan Dakin, CVT, VTS (ECC)

#### The Midas Touch: Arterial Puncture and Catheterization

This lecture will discuss techniques for collecting arterial blood samples and performing arterial catheterization of the small animal patient. This lecture will include the utility of these techniques, proper care of indwelling arterial catheters, and possible complications of arterial puncture and cannulation. Emphasis will be placed on the importance of determining patient candidacy. A brief discussion of the merits of direct arterial blood pressure monitoring will be included.

### ABGs, Easy as 1-2-3: Acid-Base and Blood Gas Interpretation

In this lecture, the discussion will revolve around the crucial information that can be obtained from both arterial and venous blood samples via a blood gas analyzer. The lecture will focus on interpretation of blood gas values to assess oxygenation, and ventilation, including hypoxemia and hypoventilation. This will include a brief summary of the concepts surrounding ventilation-perfusion mismatch. Additional concepts discussed will include metabolic and respiratory acid-base disorders. Case studies will be included.

#### A Fine Art Line: Direct Blood Pressure Monitoring

Often referred to as the Gold Standard of patient monitoring, direct arterial blood pressure monitoring can be an invaluable technique for the small animal patient in the ICU or OR setting. The lecture will include a brief review of the physiology of arterial blood pressure, as well as arterial catheterization techniques, and will emphasize the importance of determining patient candidacy. Case studies will be included.

### Kenichiro Yagi, MS, RVT, VTS (ECC, SAIM)

### Why Your Parvo Patient Should be Fed Right Away

Canine parvovirus infections cause severe gastroenteritis and lead to dehydration, shock, disseminated intravascular coagulation, and sepsis when left untreated. One simple to implement, therapy that makes a significant difference in survival chance is enteral feeding started within hours of admission, even when vomiting. Even when vomiting? Yes, even when vomiting. There are many reasons nutritional intervention serves a key role in the recovery of critical care patients. Let's discuss why this is the case.

### We Need Blood STAT!! Emergency Transfusions

"We need blood STAT!!" Has this phrase ever been used in an emergency situation in your practice? Transfusion therapy and our ability to provide blood components for our patients have greatly increased our capability in helping patients, and can be life-saving in certain situations. Being aware of our transfusion options, the value of component therapy and blood banking, and indications and contraindications of blood products will allow a veterinary team to maximize chances of successful outcomes. In addition, there may be uncommonly used methods in transfusion medicine that can be helpful in true emergency situations. We will explore transfusion options and decisions to be made in emergencies.

#### **Mythbusters: ECC Nursing Myths and Truths**

Various nursing practices are considered to be "standard of care", but are they really? Some nursing practices are continued out of tradition, while some might have valid evidence to support its use. There

also are topics of controversy that commonly spur debate. Recent evidence elucidating many prominent questions will be answered, and the methods in incorporating evidence into nursing practice discussed. The content of the lecture is guided by audience interest.

#### **Internal Medicine**

### Tracey Nowers, CVT, VTS (CP-C/F and SAIM)

### **Review of the Kidney**

This lecture will review the anatomy and physiology of the kidney and its role in regulating fluid balance. We will also discuss its function in creating hormones to help produce red blood cells, promote bone health and regulate blood pressure. Lastly, we will examine its capacity in filtering waste and minerals and promoting acid-base balance. Attendees will play an active role in labeling the parts of the kidney.

#### Common autoimmune diseases in cats and dogs

This lecture discusses the primary role of the immune system and its detection and destruction of invading microorganisms. We will review the immune system, examine four different diseases, the clinical signs, diagnosis, treatments and prognostic indicators. We will also discuss nursing care for these critical patients.

### Lynda Vermillion, CVT, VTS (SAIM)

#### When the diagnosis is in question...Could it be Addison's?

Addison's Disease has been called the "Great Pretender." This talk will focus on patient presentation, diagnostic tests and treatment. Discussion of atypical Addison's will be addressed as time allows.

#### DX - Uncontrolled Diabetes....or is it?

This discussion will focus on the uncontrolled diabetic patient. Many times, there are confounding factors such as comorbidities that make stabilizing the diabetic patient more challenging.

### My Dog is Getting Fat and Lazy: The Hypothyroid Patient

The thyroid gland plays such a large role in a dog's overall health. Too often lack of energy and poor coat condition is ascribed to diet and "aging". This discussion will delve into patient presentation, diagnostic testing, treatment, and the importance of monitoring.

### My Skinny Cat is Ravenous (and ANGRY): The Hyperthyroid Patient

The same gland that underperforms in dogs can be overactive in cats. Treatment options range from diet, to medication, surgery and radioactive therapy. Discussion about these options will provide information to help clear up any confusion.

### Surgery

### Heidi Reuss-Lamky, CVT, VTS (Anesthesia and Analgesia, Surgery)

### **Advanced Catheterization Techniques**

This lecture is designed to provide the essential background information along with detailed instructions on how to successfully perform the following catheterization techniques; central/PICC line placement using various catheter types, intraosseous and arterial catheter placement, as well as nasoesophageal or

nasogastric tube placement. This session is beneficial for veterinary technicians seeking to augment their technical skills or for those seeking specialty (VTS) status in SAIM, Anesthesia or ECC.

### **Role of the Veterinary Surgical Scrub Tech**

Often described as the surgeon's primary assistant, veterinary surgical scrub technicians (VSST) play an important role as part of the surgical team. Notable features of a great scrub tech include familiarity with the surgical procedure, surgeon's preferences and needs, as well as the ability to anticipate, even when things go wrong. VSSTs can augment the veterinarian's recommendations to the client surrounding their pet's surgical procedure as well as assist with client education during all phases of care (pre-, intra- and post-operative.)

### Beating the 'Bugs'—Sterilization is Instrumental

The responsibility of surgical instrument care is often thrust upon veterinary technicians. During this presentation, learn the science behind and importance of proper surgical instrument processing, including the role of ultrasonic cleaning devices and appropriate use of steam sterilization. Various methods to assure quality control during the sterilization process are also discussed in detail. This information is beneficial for those wanting to ensure they are following industry standards regarding proper sterilization practices, or interested in pursuing a surgical specialty through the Academy of Veterinary Surgical Technicians.

#### **Canine Elbow Dysplasia- How Lame!**

Canine elbow dysplasia (CED) is a common cause of forelimb lameness in young, large breed dogs. Learn the clinical signs, best diagnostic tests, current surgical treatments and prognosis for the various causes of CED during this 1-hour presentation. Other potential causes of forelimb lameness in dogs will also be discussed.

### Upper Airway Disease-More than just a squished face!

Managing the care of patients with upper airway disease can be challenging for the veterinary technician. Some of the most common manifestations of upper airway disease include brachycephalic airway syndrome and laryngeal paralysis. Diagnosis and surgical treatment options as well as patient management tips for these difficult cases will also be discussed.

### Hypothermia—What's the Hype?

Almost all patients undergoing anesthesia, surgery or critical patients in shock will experience some degree of hypothermia. There are many negative physiologic implications surrounding these chilly patients. During this hour learn the cold, hard facts of hypothermia as well as warmly embraced preventive measures that can be implemented in the operating room or intensive care unit.