

THE CUTTING EDGE

Veterinary Specialties
referral center, LLC

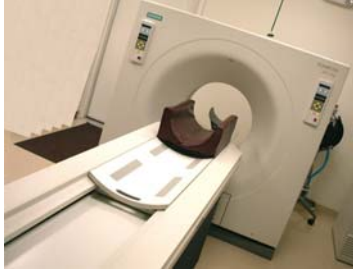
A Resource for Referring Veterinarians

Fall 2007

Updates at Veterinary Specialties Referral Center

We would like to send you the newest edition of the **Cutting Edge** as well as mention several changes at VSRC. We are pleased to announce the installation of

a Siemens **Spiral CT scanner**. The spiral CT allows for rapid acquisition times, higher resolution and decreased anesthesia time for our patients which is very



important for older animals undergoing a scan for cancer, or patients requiring surgery following the scan. We have also installed **Eklin Digital Radiography** with PACS (Picture Archive Communication System). This High-Resolution modality allows us to see in much greater detail than previously possible with X-ray film. All of our digital imaging modalities are DICOM (Digital Imaging and Communications in Medicine) compliant, facilitating rapid image sharing and evaluation by our Board Certified Radiologist.

Another very exciting addition to our practice is the **Ethicon HARMONIC SCALPEL®** unit. This is the most advanced ultrasonic cutting and coagulating unit



on the market. The harmonic scalpel functions with a hand piece that oscillates at 55,000 Hz. When the

vibrating blade couples with the protein in vessel walls, the protein is denatured forming a coagulum that seals vessels up to 5mm in diameter. The amount of heat generated in this process is less than produced by an electrocautery unit or even a CO2 laser with minimal lateral thermal damage, and therefore minimal charring and tissue desiccation. This coagulation will allow for ligature or staple free surgeries such as a splenectomy. The accuracy in tissue dissection and excellent hemostasis should aid greatly with difficult soft tissue cases such as vascular

adrenal or thyroid tumors as well as laparoscopic procedures. The addition of this new technology helps us continue to provide the best care your patients.

We are also pleased to say that although we continue performing TPLO repairs on our CCL tears, we are also one of a handful of hospitals across the country and the only one in the Capital District performing



tibial tuberosity advancement (TTA) for the repair of ruptured CCLs. We have currently performed over 250 of these procedures and have been pleased with the outcomes. The ability to perform both the TPLO and TTA (along with all of the previous

extra and intracapsular repairs) allows us to select the absolute best procedure for each individual case. There are some dogs in which a TPLO is a better option than a TTA and vice-versa. The TTA can be done bilaterally during one surgery which can be a major advantage in some patients. We have done many patients bilaterally thus far with few complications.

Now on to the CUTTING EDGE...

Circular Fixation, Tom Bowersox, DVM, DACVS

Difficult orthopedic management cases seem to be arising with more frequency now than ever before. Client expectations for the care of their pets are also at an all time high. Just how do we deal with distal or proximal long bone fractures that can't be splinted, pinned, or plated?



What about the dog with primary osteosarcoma whose owners just won't consider amputation? Angular limb deformities have always been difficult to manage with the current armamentarium of fixation devices. The

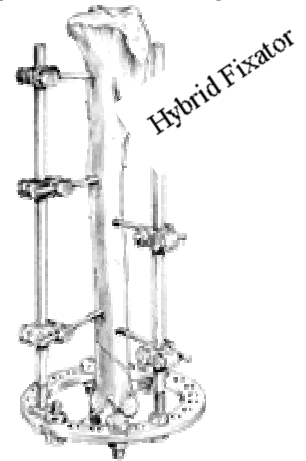
answer to many of these questions may come from 1944 Soviet Union and a physician named Ilizarov. His circular fixation technique, developed to deal with complications from WW II injuries, specifically non-union fractures, osteomyelitis, bone defects, and limb deformities, was very effective in his practice. He was unknown outside of the Soviet Union until 1981 when he presented his work at a surgical forum in Italy. The technique was introduced to human medicine in the United States about that same time. The first reported use of the technique in Veterinary Medicine came out of Italy in the late eighties.

The developments of lighter metals and engineered plastics have allowed the original Ilizarov components to become smaller and more feasible for use in our small patients. There are many applications for ring fixators in veterinary medicine. They allow for fracture repair with minimal manipulation of the fracture fragments. The current thinking in veterinary orthopedics is that biological fracture repair, i.e. fracture repair aimed at the restoration of long bone length and joint alignment with minimal to no disruption of the fracture hematoma and comminuted fragments, allows for faster healing and less surgical manipulation and surgical time. The reduced surgical time and soft tissue disruption leads to less morbidity including less swelling, less pain, and a quicker return to functionality. The ring fixator is highly adaptable to this type of repair. Ring fixators can also be used in limb sparing techniques for certain osteosarcomas. Once the cancerous section of bone is removed, the ring fixator, which can be built with motors, allows for distraction osteogenesis and formation of new bone to fill in the defect left with removal of the cancer. Once this regenerate bone is to the joint, it is “docked” and healing occurs at the site of resection and you have in essence grown a new limb for the dog. Angular limb deformities can also be addressed utilizing a ring fixator built with angular motors and distraction devices. This construct allows us to think about limb deformities in three dimensions which is really what is required in these cases. As veterinarians we have traditionally been two-dimensional thinkers when it came to angular deformities.

The ring fixators also can be built into what is called a hybrid fixator. Hybrid fixators consist of a single ring that is connected to a more traditional external fixator with bars and pins. This is the most common form of ring fixator in use today and is highly adaptable to fractures such as a distal radial fracture or simple angular bone deformities. This construct

allows for great variability in pin placement resulting in a very strong apparatus.

The circular fixator is a highly adaptable apparatus that we are pleased to be able to offer to your clients when indicated. Although advanced training was involved in learning to use and understand the indications of the ring fixator, I feel it was well worth the benefits it can bring to our patients. The addition of this technique will greatly enhance our ability to successfully deal with what have traditionally been very challenging orthopedic cases.



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