LAPAROSCOPY IS NOW AVAILABLE AT AMVS!

By Julie Noyes, DVM, (Surgical Intern)

Minimally invasive surgery -
Not just for people anymore!

In human medicine, minimally invasive surgery (laparoscopy and thoracoscopy), also called "keyhole surgery", is becoming commonplace. While these minimally invasive techniques are still on the threshold in veterinary medicine, the many benefits to patient comfort and speed of recovery are making laparoscopy and thoracoscopy a popular surgical modality among many veterinary surgeons.

What exactly is laparoscopy and thoracoscopy?

The word laparoscopy derives from Ancient Greek: λαπάρα (lapara), meaning "flank, side", and σκοπέω (skopeó), meaning "to see". It is a surgery performed in the abdomen with the aid of a camera using small incisions (usually 0.5-1.5cm). The technique can either be used to inspect and diagnose a condition or to perform an actual surgery. Laparoscopy is considered "minimally invasive" which is a term used to describe surgery that is as atraumatic as possible.
term used to describe surgery that is as atraumatic as possible especially when compared to open abdominal surgery.

Laparoscopy is performed by making very small incisions (in many cases only 5mm in size) and then inserting a laparoscope, or camera, into the abdominal cavity. The abdomen is then insuflated, which means it is filled up with carbon dioxide (a safe, absorbable gas) so all of the organs in the abdomen can be easily visualized. The images are captured by the tiny camera and then magnified and viewed on a monitor in the surgery suite.

Through these images, even the tiniest structures can be easily examined. With some procedures no additional incisions besides this one small incision may be needed. However, if need be, biopsies can be taken by creating additional small incisions for the instruments. Even if additional entries or ports are needed they are usually only 6-12mm in length.

What are the uses for laparoscopy and thoracoscopy?
in Veterinary Medicine?

These techniques can be used for both diagnostic and therapeutic indications. Many times in both human and veterinary medicine a disease process is suspected but can only be confirmed through the analysis of organ structures microscopically by obtaining specific tissue samples (biopsies). Fortunately, laparoscopic/thoracoscopic techniques offer a minimally invasive approach for collection of high-quality biopsy samples from multiple organs during one anesthetic episode.

A specific example of a common surgery that is ideal for the use of laparoscopy is to remove cryptorchid testicles that have not descended from the abdomen. During traditional open abdominal surgery the incisions are several inches long. The surgery time can be extensive while trying to locate a testicle in the abdomen. However, using laparoscopy the testicle can rapidly be located and removed. Making this potentially tedious and invasive surgery much more efficient and atraumatic.

Cryptorchid Removal Via Laparoscopy

Gastropexy is another example where laparoscopy is an ideal surgical technique. This procedure is performed to prevent a potentially life-threatening, and unfortunately common, condition know as a gastric dilatation volvulus or bloat. The surgery involves permanantly tacking the stomach to the body wall to prevent the stomach from twisting. The typical incision length in open abdominal surgery would be greater than 6-8 inches, but laparoscopically assisted it can be 1-2 incisions one-half to 2 inches in length”.

With regards to thoracoscopy, this technique has become very useful for procedures such as pericardectomy and
permanent thoracostomy drain placement for diseases such as pericardial and pleural effusion, respectively. Having the ability to do thoracic procedures thorascopically, makes these once very invasive procedures much easier on our patients.

**What are the benefits of laparoscopy/thoracoscopy versus laparotomy/thoracotomy (open abdominal surgery)?**

There are a number of advantages to performing laparoscopic surgery versus an open procedure. Smaller incisions reduce postoperative pain and shortens recovery time, as well as resulting in less post-operative scarring. Less pain postoperatively means less pain medication may be needed to keep a patient comfortable during the healing process. Although procedure times are usually slightly longer, the post-operative hospital stay is often less-in many cases, these minimally invasive procedures can be performed as an outpatient procedure. A 2005 study was published in the Journal of the American Veterinary Medical Association which showed the clinical advantages of the laparoscopic-assisted ovariohysterectomy versus open technique. The study demonstrated that: "Laparoscopic assisted spays offered up to 65% less pain and less surgical stress than the traditional open spay. (1)"

Another tremendous benefit of minimally invasive surgical techniques is that they have few complications (a less than 5% complication rate). Laparoscopic and thoracoscopic surgery has been associated with less risk of hemorrhage, dehiscence, infection and patient body heat loss during procedures compared to more common open approaches.

**When will this type of surgery be available for our pets?**

While laparoscopic surgery is considered the gold standard for a wide variety of procedures in human medicine, it is still only rarely performed in animals. This fact is shocking because just as in humans, our pets would also benefit from the many advantages such as: less risks of post-operative wound complications and significantly less pain when compared to open abdominal surgery. Fortunately Aspen Meadow Veterinary Specialists offers laparoscopic surgery to our patients. Our boarded veterinary surgeons are available.

Matthew Rooney DVM, MS, Diplomate American College of Veterinary Surgeons
surgeons Matthew Rooney DVM, MS, Diplomate American College of Veterinary Surgeons and Trent Gall Trent Gall, DVM, MS Diplomate American College of Veterinary Surgeons and our surgical residents Jim Perry, DVM, PhD Diplomate ACVIM (Oncology) and Robyn Read, DVM are specially trained in these procedures. We offer laparoscopic/thoracoscopic surgery for the following procedures:

- Feeding tube placement
- Gastropexy
- Renal, liver, pancreatic, and gastrointestinal biopsy
- Spay/Ovariectomy
- Cryptorchid surgery
- Adrenalectomy
- Cystoscopy (scope assisted cystotomy) - removal of urinary calculi (4) and resection of inflammatory polyps in the bladder
- Pericardecotomy and auricular mass removal
- Permiment thorocostomy drain placement for benign and malignant effusions

References:


(2) Prospective evaluation of laparoscopic assisted gastropexy in dogs susceptible to gastric dilation. JAVMA Mar 2002, 221(11): 1576-81

(3) Laparoscopically assisted enterostomy tube placement and full thickness biopsies of the jejunum with serosal patching in dogs. AJVR. Sep 2002, 63(9): 1313-9


(5) Resection of inflammatory polyps in dogs using laparoscopic assisted cystoscopy. JAAHA 2007, Nov-Dec, 42(6): 248-6


(8) Devitt, Chad DVM, MS DACVS. "Duration, Complication, Stress and Pain of Open Ovariohysterectomy Versus a Simple Method of Laparoscopic-Assisted Ovariohysterectomies in Dogs." Journal of the American Veterinary Medical Association. Volume 227, Number 6 (September 15, 2005).


(10) Thoracoscopic auricular mass excision and pericardectomy in the dog (Case, Crumbaker and Rooney). JAVMA


Julie Noyes, DVM

AMVS Receives Green Building Award

Aspen Meadow Veterinary Specialists (AMVS) was presented with the award for Best Green Health-Care Facility at the 1st Annual Boulder Valley Green Building Awards. The Colorado Green Building Guild partnered with Boulder County Business Report to present the awards at
Boulder County Business Report to present the awards at the annual Green Summit: Blending Business and Environment held on August 7th. The Guild introduced these awards to recognize local green buildings and communities for their enlightenment, creativity, and leadership in environmental design and sustainability. Awards were offered based on company efforts to reduce their carbon footprint, as well as their ability to incorporate recycled materials into design projects. AMVS was recognized for being the best green, sustainable, and energy-efficient facility dedicated to human or animal health care. AMVS was built out of an existing car dealership utilizing as much of the previous structure and materials as possible. More than 70% of the materials from the previous facility were reused, including the store front and frame, glass, insulation, and doors. Dr. Matt Rooney, owner of AMVS, always knew he wanted to own an environmentally friendly practice, "patient care has always been the first priority, but the fact that we can do this in a green manner is great." AMVS was the first Partner for A Clean Environment (PACE) certified veterinary hospital in Colorado, as well as the first Leadership in Energy and Environmental Design (LEED) certified veterinary clinic in the country. AMVS continues its commitment to sustainability through educating others about the importance of sustainable technology and environmentally friendly practices.

Catherine Hillier

Upcoming Events!

Please join us as we participate in some events in our community.
**September 1st & 2nd**
AMVS will be sponsoring the Brainard Portal Restoration and Trail Project with the Wildlands Restoration Volunteers (WRV) non-profit organization. Disturbance around the portal is in desperate need of restoration and the portal needs a trail connection to the trail system. WRV volunteers will construct 450 feet of trail, plant 500 or more native trees and shrubs, install erosion matting, plant seeds, and stabilize and revegetate the eroding slope by the booth entrance.

**Thursday, September 13th From 6-9 pm**
AMVS will be sponsoring the Longmont Humane Society's Homeward Bound Harvest event that includes food from 15 restaurants, live music, wineries, breweries, and distilleries, an animal fashion show, and live and silent auctions. Tickets are $75.00 and can be purchased by clicking on the icon below.

**Saturday, October 20th**
We will also be sponsoring Wildlands Restoration Volunteers (WRV) in the aid of the St.Vrain Lafarge project. Volunteers will spend the day removing invasive Russian
Volunteers will spend the day removing invasive Russian Olive Trees, creating fish habitat reef structures and planting 400 to 500 native Riparian Trees.

To volunteer for either of these events please visit WRV's website by clicking their logo below:

We hope to see you there!

Upcoming CE

Fourth event in a series of ongoing Continuing Education Seminars

Hosted by
Aspen Meadow Veterinary Specialists
104 South Main Street
Longmont, CO 80501
Lecture
CT and MRI Applications in Veterinary Medicine

Speaker
Rachel Bowlus-Carson, DVM, DACVR

Date and Time
Thursday, August 23, 2012
6:30pm Registration, Appetizers, and Drinks
7:00-8:00pm Lecture

RSVP
303-678-8844
Monday, August 20, 2012

This will be a veterinarian specific lecture.
Technician specific topics to be announced.

Thank you for your continued support!
-Aspen Meadow Veterinary Specialists

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