

# Veterinary Specialists & Emergency Service



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## Quarterly Newsletter Summer 2010

### **News at VSES:**

#### **Cardiology Service Update**

Beginning in September, Cardiology services will have increased availability. Dr. Anna Gelzer, DMV, DACVIM (Cardiology) will be with us on a weekly basis for consultations. Please call VSES to schedule an appointment.

#### **Oncept® Available at VSES**

VSES and Joanne Intile, DVM, DACVIM (Oncology) are pleased to announce that the first DNA-based canine cancer vaccine for treating oral melanoma is now fully licensed by the USDA and is available at VSES. Oncept®, or the “melanoma vaccine” contains a sequence of DNA encoding for the human tyrosinase gene, which, when injected intradermally in dogs, works to destroy malignant melanoma cells. Oncept® is licensed for use in dogs with Stage II or Stage III oral melanoma, and is only authorized for use by board-certified veterinary oncologists at this time. If you have a patient you think could benefit from Oncept®, or if you have further questions regarding the vaccine, please call VSES to schedule a consultation with our oncology service or to speak to Dr. Intile directly.

#### **On-Line Access to X-Rays**

New and improved radiology equipment is now available at VSES. If you would like to view images for your patients on-line, please contact Angela Keymel at VSES for a user name and password.

#### **Radiograph Consult Availability**

We are pleased to share that radiograph consults and interpretation are available at VSES. Please include completed referral form for all radiograph requests to include client, patient, a brief history and applicable laboratory findings. You will receive a written fax report within 48-72 hours from date of receipt. Your hospital will be billed monthly for radiograph consults at \$60.00 per patient.

#### **Updated Referral Form**

VSES is committed to continuing to improve our relationship with the referring community ensuring optimal patient care, positive communication and team approach. To help this relationship we have created a new referral form, a copy of which is included in the newsletter sent to the director of your hospital. Please discard existing stock of referral forms and use this form moving forward. A PDF version of the form is also available on our website.

#### **Referral Binder Updates**

The following updated pages have been sent to your hospital's director for inclusion in your hospital's rDVM binder: Internal Medicine, Surgery, Animal MRI, Cardiology and Animal Rehabilitation.

#### **Rounds at VSES**

Rounds take place daily from 8am to 9am. We have added the rounds calendar to our website; please refer to it for subjects/topics. You are always welcome to attend and participate. Please also know you are welcome to spend time in our treatment room. Let us know when to expect you!

## **Veterinary Specialists & Emergency Service**

### **CRITICAL CARE**

Kristen Woosley, DVM,  
DACVECC

### **EMERGENCY**

Kimberly Dodge, DVM  
Bruce Ingersoll, DVM  
Simon Kirk, DVM,  
*Hospital Co-Director*  
Johnny Lamb, DVM  
Thomas Linnenbrink, DVM  
Joseph Wilder, DVM, DABVP

### **INTERNAL MEDICINE**

Michael Koch, VMD, DACVIM  
Laurie Prober, VMD, DACVIM

### **ONCOLOGY**

Joanne Intile, MS, DVM,  
DACVIM (Oncology)

### **OPHTHALMOLOGY**

Kent Burgess, PhD, DVM,  
MS, DACVO  
*Hospital Co-Director*

### **RADIOLOGY**

Jennifer Bouma, VMD, DACVR

### **SURGERY**

Justin Greco, DVM, DACVS  
Lauren May, VMD, DACVS  
Stephen Mehler, DVM, DACVS

### **CONSULTING SERVICES**

Cardiology  
Neurology

## **Veterinary Specialists & Emergency Service**

825 White Spruce Blvd.  
Rochester, NY 14623  
585-424-1277  
585-424-1260

## **VSES Success Stories: Leo**

Leo, an 11 year old male domestic shorthair cat, presented to VSES for decreased appetite, vomiting, and jaundice.



On physical examination, Leo was jaundice and his liver was enlarged. A serum biochemistry revealed high liver enzymes as well as bilirubin. Together these abnormalities suggest liver failure. Leo also had low potassium and phosphorus, electrolyte changes that can occasionally be seen with liver failure. On ultrasound, his liver was hyperechoic and the wall of the gall bladder and bile ducts were thickened. His pancreas was enlarged and hypoechoic and the tissue around it was bright. These ultrasound changes are consistent with a diagnosis of pancreatitis with concurrent cholangiohepatitis (inflammation of the gall bladder, bile ducts, and liver). Because the liver, gall bladder, and pancreas are so close to

each other in cats, inflammation in one area often leads to inflammation of the others. This is likely what happened in Leo. Another cause of liver failure in cats is Toxoplasma infection. Leo's blood tests for this infection were negative. Since Leo had not been eating for awhile before coming into the hospital, he also likely had a condition called hepatic lipidosis, or "fatty liver".

Hepatic lipidosis can occur any time a cat does not eat enough or absorb enough food to meet their nutritional needs. This nutritional deficiency can happen for a number of reasons including gastrointestinal disease, pancreatitis, liver disease, kidney disease, or even emotional reasons (Leo's owner was in the hospital which may have made him more stressed). No matter what the underlying cause of the "fatty liver" is, the condition can be quite serious and even life-threatening as it can cause the cat to develop severe liver failure.

"Fatty liver" can progress very quickly in cats. Therefore, it is important that owners always pay close attention to their cats' eating habits and notify their veterinarian if they notice a decreased appetite for more than two days. We generally recommend aggressive medical management for cats who are not eating normal for 3 or more days. The most important way to prevent or treat "fatty liver" is to get good nutrition into the cat. Sometimes, anti-nausea medication or appetite stimulants will be used. If there is an underlying cause for why the cat stopped eating, it needs to be addressed. Often owners will try to force feed their cats but it is very difficult to get sufficient amounts of food into them with force feeding and you can induce food aversions.

Often, in these patients, we recommend the placement of a feeding tube to help families be able to get nutrition into their cat while we address the underlying reason the cat is not eating on his or her own. Depending on the situation, different feeding tubes are used, but most commonly we use esophageal feeding tubes (into the esophagus). While most owners are nervous at first, it is easy to learn how to use these tubes at home. Prior to each feeding, we encourage the cat to eat on his or her own, but if they are not interested in eating, we can ensure that they get food through the tube. Esophageal tubes are for short term use (weeks to months) and once the cat is eating well again, we can easily remove the tube. Overall, cats who are not eating well have a guarded prognosis, meaning that while some cats do not make it, a significant number of cats can recover from the condition. The most important factors in their prognosis are how quickly the problem is addressed (the sooner the better!); the cause of the decreased appetite and how quickly it can be dealt with; and how aggressively the decreased appetite is treated. At VSES, we consider cats with decreased appetites critical patients who should be dealt with on a fairly urgent basis.

Leo had an esophageal feeding tube placed, through which he was able to get food and medication in a non-stressful manner. Leo was given antibiotics to cover for bacteria causes of cholangiohepatitis, anti-inflammatory prednisone to decrease the inflammation associated with cholangiohepatitis, anti-nausea medications, an appetite stimulant, and potassium supplementation.

Once the tube was placed, he slowly started to improve. As soon as he was handling his feedings well and his electrolytes began to improve, he was sent home for further supportive care. He began eating more on his own and his liver values improved and then normalized. About 3 weeks after placing the tube, Leo's appetite was completely back to normal and he was off of the anti-nausea medications and appetite stimulant. We kept the feeding tube in for an extra week while he finished getting the rest of his medications; it was much easier to give him medications this way. Leo's feeding tube was removed about 1 month after its placement. He continues to do fabulous at home and his blood work changes have normalized.



**Laurie Prober, VMD, DACVIM**, earned her VMD degree from the University of Pennsylvania School of Veterinary Medicine and completed her residency at Michigan State University. She successfully completed her ACVIM Internal Medicine qualifying examination and became board certified in December 2009. Dr. Prober's professional interests include endocrinology, hepatobiliary disease, urology and infectious diseases.

# Ectopic Ureters

## Lauren May, VMD, DACVS

Ectopic ureters are a congenital abnormality of 1 or both ureters in which the ureteral orifice is in a location other than the normal position in the trigone of the bladder, including at the bladder neck, distal, middle or proximal urethra, vagina, uterus or vestibule. Over the last few years, multiple research articles have been published, making advances in the way we can diagnose and treat these cases. Therefore, while this is not a new condition it is a condition worth revisiting.

### Overview:

Ectopic ureters can be intra or extramural. In dogs, greater than 95% are intramural and in cats the majority are extramural. Ectopic ureters are considered a rare condition in dogs and cats but they are the most common congenital cause of urinary incontinence and also hydronephrosis in dogs and they are commonly associated with multiple congenital and acquired abnormalities of the urinary tract (up to 94% of cases in dogs).

In dogs, ectopic ureters are reported to be greater than 20 times more common in females than male dogs and in most case reports in male dogs, they are continent. This is suspected to be due to the proximal location of the ectopia, and the long male urethra, which provides a strong external muscular sphincter distal to the ectopic orifice. Therefore, it is thought that the true prevalence of ectopia in male dogs is most likely underestimated and goes unrecognized. In cats, the sex predilection is not as clear-cut; in one report 13 out of 23 cases were female.

### Clinical Signs:

- Urinary incontinence; most common
- Abdominal enlargement
- Lower urinary tract signs (stranguria, hematuria, dysuria, pollakiuria)

### Diagnosis:

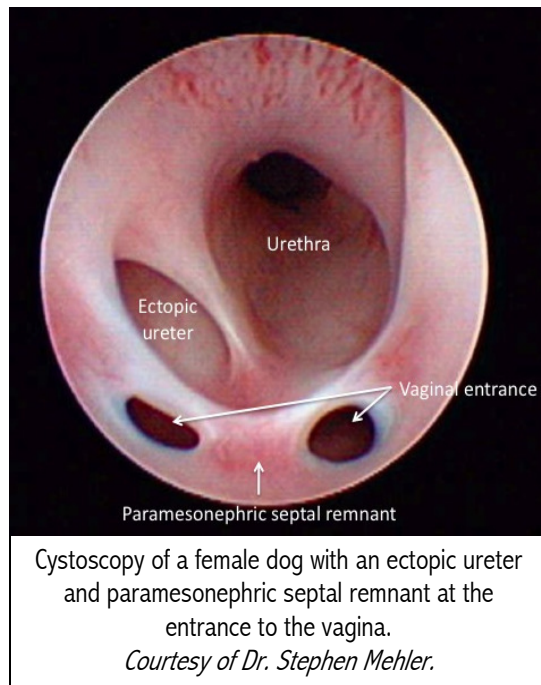
Traditionally the diagnosis of ectopic ureters involved **contrast radiography**, with intravenous pyelography (IVP) being the method of choice. On an IVP, an alteration from a j shape where the ureter enters the bladder to straight is highly suggestive of an ectopic ureter. It is reported that contrast radiography allows correct prediction of the location of an ectopic ureter in 62%-77% and therefore adjunct diagnostics are recommended. Other modalities that have been reported to aid in the diagnosis of ectopic ureters include ultrasound, cystoscopy and CT-IVP, with cystoscopy and CT-IVP falling into favor.

On **ultrasound**, the absence of normal urine flow may be observed or a distended ectopic ureter may be able to be tracked distally to the urethra. Limitations include that overlying bone may obscure imaging of an intrapelvic bladder neck and ureteral jets are not always visible in normal animals or those with ureteral infection or obstruction. Therefore, it is recommended that US be used in addition to other diagnostics.

The advantages of **CT-IVP** include that the results are not affected by superimposition and allows better visualization of the ureterovesicular junction. The disadvantage is that the images of the junction are limited by peristalsis. The advantages of **cystoscopy** include that it can identify the specific morphology of the terminal segment of the ureter, the location of the ureteral orifice and flow through the opening and it provides a general appreciation of other abnormalities in the mucosa of the bladder. The disadvantages of cystoscopy include that it may miss concurrent upper urinary tract abnormalities and it requires general anesthesia. Cannizzo KL, et al compared the use of cystoscopy vs. excretory urography for the diagnosis of ectopic ureters, which showed that cystoscopy yielded a correct diagnosis in all dogs while an excretory urogram correctly identified 78.2% of ectopic ureters and 50% of normal ureters.

### Treatment:

Treatments recommendations are first and foremost based on the kidney function followed by the type of ectopic ureter (intramural vs. extramural). If the kidney is nonfunctional, determined by direct or indirect measurements of GFR, a ureteronephrectomy is recommend. If the kidney is functional, and the ureter is **extramural**, a **ureteroneocystostomy** is performed. When the kidney is functional and the ureter is **intramural**, traditionally 2 surgical procedures have been performed including **neoureterostomy with ligation of the distal ureteric tunnel** or **neoureterostomy with resection of the distal segment and urethral-trigone reconstruction**. Both are open procedures and require specialized equipment in cats and small breed dogs. A study comparing them was unable to detect substantial differences between the success of the 2 techniques. More recently **cystoscopic laser ablation (CLA)** of the intramural segment is falling into favor. CLA is a closed technique, which permits outpatient treatment. It allows the simultaneous diagnosis and treatment of ectopic ureters in a minimally invasive fashion. It requires an endoscope, intracorporeal laser, various quidewires, catheters and ureteral stents. Overall, success of surgical fixation of intramural and extramural ectopic ureters with or without concurrent medical intervention is reported to be 58%-95%. *(Article Continued on Page 4)*



Cystoscopy of a female dog with an ectopic ureter and paramesonephric septal remnant at the entrance to the vagina.  
*Courtesy of Dr. Stephen Mehler.*

### Sequelae:

- Hydronephrosis/hydroureter; most common
- Pyelonephrosis/nephritis
- Recurrent urinary tract infections
- Renal insufficiency/failure



**Lauren May, VMD, DACVS** earned her VMD degree from the University of Pennsylvania School of Veterinary Medicine, and completed a rotating internship in small animal medicine and surgery at the University of Minnesota College of Veterinary Medicine. Dr. May then started her residency at the University of California at Davis Veterinary Teaching Hospital before moving to Michigan State University's College of Veterinary Medicine, where she completed her residency. Dr. May performs orthopedic and soft tissue surgery and has a strong professional interest in surgical oncology and urogenital surgery.

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## UPCOMING CE, ROUNDS & SHADOWING

SAVE THE DATE!

**Lowell Ackerman, DVM, DACVD, MBA, MPA, Senior Specialty Hospital Liaison, Pfizer Animal Health** will be presenting at Rochester Academy of Medicine from 6:30-9pm, **October 20, 2010**. Dr. Ackerman is a nationally recognized speaker and published author. Topics covered will focus on **veterinary business and practice management**. We are excited to have him present to the Rochester veterinary community. NYSVMS approval pending. Look for invitations and more information to be sent to your hospital as the date nears.



*Dr. Ackerman received his undergraduate degree from the University of Western Ontario in London Ontario in 1977, his DVM from the Ontario Veterinary College in Guelph Ontario in 1982, and board certification from the American College of Veterinary Dermatology in 1985. In addition to his veterinary credentials, Dr. Ackerman also earned an MPA from Harvard University, an MBA from the University of Phoenix, and a Certificate in*

*Veterinary Practice Administration from Purdue University. Before joining Pfizer Animal Health, Dr. Ackerman was a Clinical Professor at Tufts University Cummings School of Veterinary Medicine, as well as being a management consultant with Bizvet, Inc., where he dealt with all aspects of veterinary practice management and administration. He remains an adjunct professor for both Tufts University and the Ontario Veterinary College.*

*Continued from page 3*

### **Veterinary Specialists of Rochester:**

If you have a suspect ectopic ureter case that you would like to refer to the Veterinary Specialists of Rochester, we would be happy to see it. We recommend scheduling an appointment through the internal medicine service to confirm the diagnosis and if the owner opts for surgery, this can be performed through the surgery service. Diagnostically we are able to do ultrasound and cystoscopy and we can surgically repair ectopic ureters in medium and large breed dogs.

### **References:**

- Cannizzo KL, McLoughlin MA, Mattoon JS, et al. Evaluation of transurethral cystoscopy and excretory urethrography for diagnosis of ectopic ureters in female dogs: 25 cases (1992-2000). *J Am Vet Med Assoc* 2003; 223:475-481.
- Berent AC, Mayhew PD, Porat-Mosenco Y. Use of cystoscopic-guided laser ablation for treatment of intramural ureteral ectopia in male dogs: four cases (2006-2007). *J Vet Intern Med* 2008;232:1026-1034.
- Holt PE, Gibbs C. Congenital urinary incontinence in cats: a review of 19 cases. *Vet Rec* 1992;130:437-442.
- Mayhew PD, Lee KC, Gregory SP, et al. Comparison of two surgical techniques for management of intramural ureteral ectopia in dogs: 36 cases (1994-2004). *J Am Vet Med Assoc* 2006;229:389-393.
- Samii VF, McLoughlin MA, Mattoon JS, et al. Digital fluoroscopic excretory urography, digital fluoroscopic urethrography, helical computed tomography, and cystoscopy in 24 dogs with suspected ureteral ectopia. *J Vet Intern Med* 2004;18:271-281.
- Sutherland-Smith J, Jerram RM, Walker AM, et al. Ectopic ureters and ureteroceles in dogs: presentation, cause and diagnosis. *Compend Contin Educ Pract Vet* 2004;303-316.