

The Cutting Edge

Annapolis

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News & Notes

- Dr. Weeren & Dr. Roa will be instructors for the **HELICA** hip replacement wet lab at **ACVS** this October in Washington, D.C. The **HELICA** hip replacement is a new highly successful less invasive hip replacement system. We are currently the only practice in the eastern U.S. that is offering this procedure.
- Look for us at the following upcoming events:
 - Dogfest** on 10/10/09 in Cockeysville, MD
 - BARCStoberfest** on 10/17/09 in Baltimore City's Patterson Park
- Dr. Roa will be speaking at the 11th annual **CVRC Fall Conference** on **November 8th** at the Ruth's Chris Steak House in Pikesville, MD. Seating is limited, please **RSVP** with Andy Furtado at 800-788-2872 or via e-mail at cvrcvet@erols.com.

Minimally Invasive Approach to Cystic Calculi Removal at CVSS

Cystic calculi are a common problem in the domestic dog and cat. The most common urinary calculi in the dog are oxalate, struvite (magnesium ammonium phosphate) and cystine. Less than 10% of the calculi seen in dogs are urate. The most common cystic calculi in cats are struvite and oxalate. Canine breeds with increased risk of calculi include the English bulldog, Poodle, Pug, Lhasa Apso, Pekingese, Miniature Schnauzer, Shih Tzu, Dachshund, Yorkshire Terrier, Welsh Corgi, and the West Highland White Terrier. Dalmatians are genetically predisposed to urate calculi and Newfoundlands are genetically predisposed to cystine calculi. Most dogs present with their first episode of cystic calculi at 5-7 years of age. A urinary tract infection can often be a predisposing factor for struvite calculi development in dogs. However, infection is an uncommon predisposing factor in cats. The most common bacteria associated with calculi are *Escherichia coli*, *Staphylococcus spp.*, and *Streptococcus spp.* A cystotomy with complete examination of the urinary system is often the procedure of choice for cystic calculi discovered for the first time. However, a less invasive approach may be desirable in the 25% of patients that experience recurrence.

Non-surgical options for stone management include medical management with prescription urinary diets to dissolve struvite stones or prevent reoccurrence. Laser lithotripsy is also a non-invasive form of calculi removal and is being performed at some universities. Minimally invasive routes include urethrocystoscopy or laparoscopically assisted cystotomy.

Vaginal cystoscopy can be performed in female dogs greater than 10-15 pounds. The cystoscope can be advanced up the urethra to visualize the bladder and calculi. A basket forcep placed through the cystoscope is used to remove the stones. Limiting factors for this procedure are the size and number of calculi, the size of the patient, and gender (canine female patients only). General anesthesia is required for this procedure.

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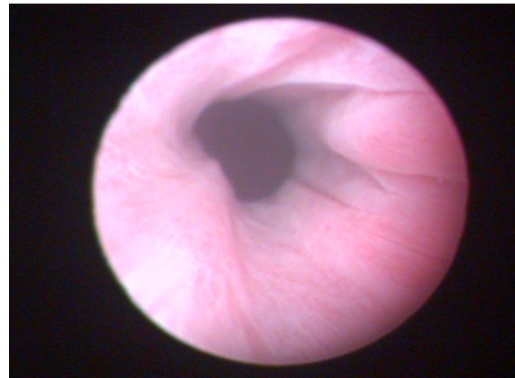
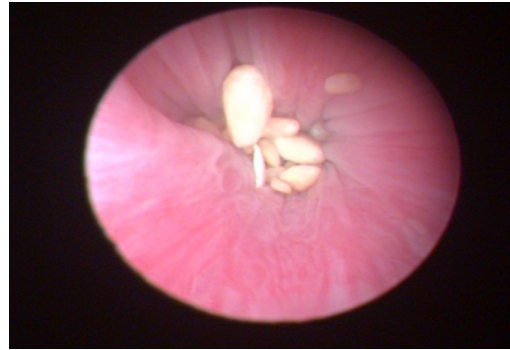
Board certified surgical specialists providing the very latest in surgical care including:

- orthopedics • soft tissue surgery • neurosurgery • radiosurgery • reconstructive surgery • oncological surgery • arthroscopy • laparoscopy
- canine & feline rehabilitation

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Laparoscopically assisted cystotomy can be performed on both male and female dogs and cats. General anesthesia for the procedure is usually an hour. A small 2 cm incision is made in the caudal abdomen. The bladder is identified and the laparoscope is inserted through a 0.5 cm incision into the bladder. The bladder lumen and stones are visualized allowing the calculi to be removed through the incision in the bladder. The laparoscope allows the surgeon to confirm all stones are removed from the bladder and urethra before closure with two interrupted sutures. The linea and skin incision usually require 4 sutures for closure. This procedure provides a minimal incision, rapid recovery and decreased hospitalization. Most patients go home the same day and the cost is usually less than a cystotomy.

Please contact us if you have any questions regarding cystoscopy or laparoscopically assisted cystotomy for one of your patients.



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