

A Focal Point for Treating Urinary Tract Disorders

The late Gerald V. Ling spent 40 years on the School's faculty laying the foundation of small animal urology. Jodi Westropp, associate professor in the Department of Medicine and Epidemiology, benefits from Ling's scientific legacy and continues to make progress in this evolving field. She spends the majority of her clinical time on urinary cases and provides a professional focal point for diagnostics, veterinary care and research. Westropp is particularly interested in diseases of the lower urinary tract: canine and feline urolithiasis, feline idiopathic cystitis and canine urinary incontinence.

Laboratory services

Veterinary practices and laboratories throughout the United States and several foreign countries call upon the Gerald V. Ling Urinary Stone Analysis Laboratory to identify the composition of bladder and kidney stones (uroliths) removed from animals. A geologist in the laboratory can identify dozens of different types of minerals found in stones using analytical techniques such as polarized light microscopy, infrared spectroscopy and x-ray diffractometry. Veterinarians may submit account information and patient data directly through the laboratory's website, www.vetmed.ucdavis.edu/usal/index.cfm. "Providing an accurate stones analysis is essential to develop a tailored management prevention strategy for each pet," Westropp explains.

The group deals with urinary stones in cats, dogs, guinea pigs, turtles—even dolphins. For specific questions related to urinary stone disease, contact stonelab@ucdavis.edu.

Novel treatments

Many owners ask for a minimally invasive way to remove uroliths from dogs and cats. Besides traditional surgery, faculty clinicians offer voiding urohydropropulsion for animals with small bladder stones. Veterinarians can also remove small stones using a basket inserted through a cystoscope. Finally, clinicians may recommend

laser lithotripsy to break up and remove urinary stones. These approaches employ minimally invasive techniques that may allow a patient to be discharged the same day as the procedure.

Lasers can also be used to treat ectopic ureters and polypoid masses. In one case at the William R. Pritchard Veterinary Medical Teaching Hospital, "Dash," an 11-year-old male cairn terrier, needed a transfusion due to severe bleeding from his lower urinary tract. A cystoscopy revealed a polypoid mass in his urethra where it curves around the pelvis. Surgery in that location would have posed serious risks, so Drs. Westropp, Carrie Palm, William Culp and Erica Queen used the Holmium: YAG laser to twice resect the mass.

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Staff member Ms. Dee Johnson makes a photographic record of kidney stones in the G.V. Ling Urinary Stone Analysis Laboratory.

Urinary Tract Disorders Continued

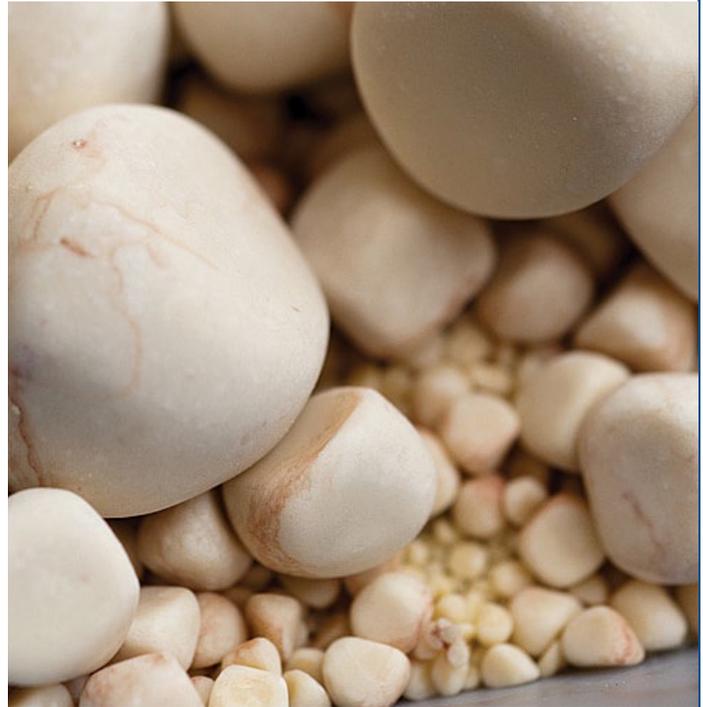
Dash continues to do well as the owners monitor his progress.

Recruiting for clinical trials

“We are actively recruiting cases for a variety of lower urinary tract diseases in animals,” says Westropp. “These studies and clinical trials offer owners the latest diagnostics and treatments as we study these disorders and how best to treat them.” Investigations include:

- Evaluation of the impact of a special commercial diet on urate urolithiasis recurrence in Dalmatian dogs. This study is open to any Dalmatian with a history of urate stones that is able to visit the hospital four times in one year. After examining the dog, veterinarians will provide a thorough nutritional assessment, food for one year, body composition analyses and ultrasound evaluations at no cost to the owner.
- Rachel Pollard, in collaboration with the urinary and oncology group at the teaching hospital, is investigating a novel ultrasound technique to measure blood vessels in bladder tumors targeted by chemotherapy. The objective is to help clinicians predict whether a dog is responding to a specific type of chemotherapy or should be switched to a more effective drug. Ultrasounds will be performed every three weeks at no charge to the clients.
- Westropp, William Culp and Carrie Palm are evaluating dogs that require urethral stent placements due to urethral obstruction with malignant tumors. Incontinence is a potential side effect with a urethral stent. The researchers hope to be able to predict which dogs may become incontinent after a stent is placed. If enrolled, a discount on the stent placement is provided to the owner.

More information is available at:
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Several types of minerals can form into kidney or bladder stones.