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Angell Animal Medical Center Referral Guide

Cardiology Service

Referral Liaison: Robin Grammer
Referral Line: 617 541-5038 Referral Fax: 617 989-1653
Email: cardiology@mspca.org Web site: www.mspca.org/cardiology

Dermatology Service

Referral Liaison: Rebecca Stlaske
Referral Line: 617 524-5733 Referral Fax: 617 989-1613
Email: dermatology@mspca.org Web site: www.mspca.org/dermatology

Neurology Service

Referral Liaison: Natasha Bureau
Referral Line: 617 541-5140 Referral Fax: 617 989-1666
Email: neurology@mspca.org Web site: www.mspca.org/neurology

Oncology Service

Referral Liaison: Gary Vanasse
Referral Line: 617 541-5136 Referral Fax: 617 541-5130
Email: oncology@mspca.org Web site: www.mspca.org/oncology

Pain Medicine Service

Referral Liaison: Natasha Bureau
Referral Line: 617 541-5140 Referral Fax: 617 989-1666
Email: painmedicine@mspca.org Web site: www.mspca.org/painmedicine

For all other referrals, please continue to call Eleanor Cousino, Angell Referral Coordinator at 617 522-5011.



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Specialty Care for Avian and Exotic Animals

With only 127 board-certified avian and exotics specialists in the world, Angell Animal Medical Center is proud to have two of them on our team. The Avian and Exotics service is staffed seven days a week, and consists of one resident, four technicians and two board-certified avian specialists.

Optimal wellness and emergency and critical care for avian, small mammal, reptile or other exotic pets require experienced veterinary management, specialized diagnostic and treatment protocols and state-of-the-art equipment and facilities designed for these special species. Angell provides these, all under one roof.



The Avian and Exotics team frequently performs surgery on exotic pets such as guinea pigs.

Our nationally recognized veterinarians, Connie Orcutt, DVM, DABVP-Avian and Jennifer Graham, DVM, DABVP-Avian, DACZM; have years of experience treating numerous exotic species, including birds, rabbits, ferrets, guinea pigs, rodents, special small mammals (such as chinchillas or hedgehogs), reptiles and amphibians. They treat over 4,000 patients each year.

Angell offers specifically designed general and isolation wards for care of avian and exotic patients, including avian incubators and specialty reptile hospital caging. Having specialists in areas such as surgery, internal medicine and radiology provides additional expertise when handling the most complex cases.

The Avian and Exotics service at Angell includes endoscopy, radiology, ultrasonography, blood work testing, avian and exotic animal surgery and advanced diagnostics, including infectious disease testing.

To refer a client to the Avian and Exotics service at Angell, please call Referral Coordinator Eleanor Cousino at 617 522-5011. For more information, please visit www.mspca.org/avianandexotic.

Advanced Technology Saves Thousands of Lives at Angell

Angell Animal Medical Center takes pride in keeping up with technology to ensure that patients receive the best possible care. Angell's Emergency and Critical Care Unit (ECCU) treats approximately 15,000 patients per year and responds to trauma 24 hours a day. The ECCU department includes four board-certified specialists and offers state-of-the-art technology to handle every emergency.

The ECCU staff has come to depend on one piece of equipment in particular — a respirator that performs mechanical ventilation. This is used on animals with respiratory failure after trauma to the lungs, pneumonia or systemic disease that is severe enough to affect lung function. The animal must be heavily sedated or anesthetized and requires constant supervision and monitoring by nurses and doctors. ECCU's four senior staff veterinarians, eight residents and critical care nurses use a team approach to monitor and manage these cases of critically ill pets on the respirator.

The ECCU's monitoring capabilities include direct and indirect arterial blood pressure, coagulation parameters, blood chemistries and blood gases, telemetry and most recently, co-oximetry. Co-oximetry allows the staff to measure blood for methemoglobin and carboxyhemoglobin levels when acetaminophen or carbon monoxide poisonings are suspected. An advancement in the near future will allow the staff to have the ability

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to monitor blood osmolality and colloid oncotic pressure.

Specially constructed oxygen cages provide an oxygen-enriched, temperature- and humidity-controlled environment for our most critical patients. Advanced techniques, such as blood component therapy and peritoneal dialysis, are available in addition to ventilator therapy.

The Emergency and Critical Care Unit is also equipped to handle any other emergency, including surgery, endoscopy and blood and plasma transfusions thanks to access to Angell's full blood bank. The ECCU staff benefits from access to board-certified veterinarians in Angell's other specialty services such as radiology, neurology, surgery, internal medicine, pathology, ophthalmology and dermatology when consultation and advanced diagnostics are needed.

To refer a patient to the Emergency and Critical Care service at Angell, please call Referral Coordinator Eleanor Cousino at 617 522-5011. For more information about the service, please visit www.mspca.org/emergency.



Vet technician, Traci Marchese, monitors a patient on the respirator.

CASESTUDY

Dentistry

William Rosenblad, DVM

PATIENT:

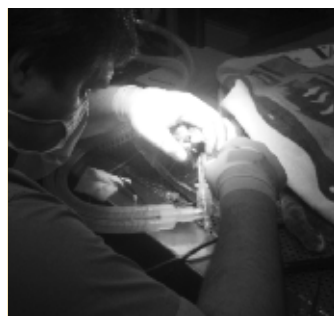
Zoe, a 13-year-old spayed female Miniature Schnauzer

HISTORY AND PRESENTING CONCERN

Zoe, a Miniature Schnauzer, presented for treatment of severe halitosis. Periodontal disease is certainly not unusual for a Miniature Schnauzer (or any other small breed dog), but over the previous two years, Zoe had been diagnosed with a heart murmur, cataracts, retinal degeneration, hyperlipidemia and seizures. Historically, many veterinarians would have balked at placing such a patient under anesthesia for a "dental." However, Zoe's owners were (rightly) concerned about the dental disease adversely affecting Zoe's quality of life (and everyone with a functional sense of smell), and exacerbating her other medical issues. Oral examination revealed severe generalized dental calculus, several loose teeth and hair trapped between some teeth. A plan was made to consult with Zoe's cardiologist, Dr. Rebecca Malakoff, and neurologist, Dr. Debbie Ruehlmann, to put together an anesthesia protocol to make the dental procedure as safe as possible. In addition to Zoe's medical problems, she was on Kepra, Analapril and fish oil supplements.

DIAGNOSIS AND TREATMENT

While Zoe was under anesthesia, a complete periodontal examination, including dental radiographs, was performed. Many teeth were loose and some had root abscesses. Zoe lost most of her incisors and molars and several premolars. Her remaining teeth were scaled and polished. She had a surprisingly quick and smooth recovery and was discharged the same evening. Chlorhexidine oral rinse, Tramadol and instructions to finish a course of Clavamox were dispensed.



Dr. Rosenblad performs an oral examination on a patient.

FOLLOW-UP

Zoe's recheck exam took place four weeks after the dental procedure. The tooth extraction sites had healed well with only a few suture remnants remaining. Her owners could not believe how well she was doing and called her "a whole new dog!" Her appetite and activity had improved greatly within days of the dental procedure, not to mention her breath!

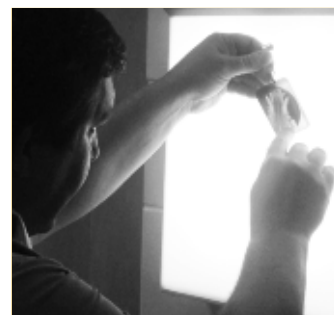


William Rosenblad, DVM, has extensive experience treating periodontal disease and providing quality dental care to many species.

Dental disease, specifically periodontal disease, is the most common disease in dogs and cats. The veterinary profession is becoming increasingly aware of not only how much dental disease is out there, but also, as noted in Zoe's case, how proper treatment can make such a dramatic difference. In humans, dental disease has been linked to a significant number of systemic illnesses, including chronic inflammatory diseases. We are now more fearful of the progression of dental disease, including exacerbation of other diseases, than of properly performed and monitored anesthesia.

FOR MORE INFORMATION

The Dentistry service is lead by two experienced veterinarians, and a team of technicians, whose practice is fully dedicated to animal dentistry. The service is capable of treating periodontal disease, fractured teeth, malocclusions, jaw fractures, oral tumors, feline resorptive lesions and stomatitis. In addition, the dentistry staff frequently works with the other specialists at Angell to prepare and manage patients with special anesthesia needs.



Dr. Rosenblad reviews the radiographs of one of his dental patients.

For more information, or to refer a patient to the Dentistry service, please call Referral Coordinator Eleanor Cousino at 617 522-5011 or visit www.mspca.org/dentistry.

CLINICAL BRIEF

Hyperaldosteronism

Doug Brum, DVM

Two of the most common problems seen in older cats are chronic renal disease and hypertension. Some of these cats also have a mild to moderate hypokalemia. An emerging diagnosis in a number of them is hyperaldosteronism, and it is one that can be easily missed. As of 2003, only five cases of primary hyperaldosteronism had been reported in veterinary literature. It was considered a very unusual condition. However, in the past several years, numerous publications have described the syndrome, and it is being identified with more frequency by clinicians around the country. It definitely should not be considered a rare condition anymore.



Doug Brum, DVM, of Angell's Internal Medicine service.

Excess production of aldosterone may be the result of primary or secondary causes. Primary hyperaldosteronism is due to the autonomous secretion of aldosterone by abnormal cells in the adrenal gland. This can either be due to an adrenal tumor or from bilateral adrenal hyperplasia. In people, this is a very important condition (Conn's syndrome), as it is a potential curable cause of hypertension. Secondary causes are rarer, resulting from some other condition in which excessive aldosterone production is a normal adrenal response to the activation of the renin angiotensin system (RAS). These include kidney, liver (cirrhosis) or cardiac disease — states associated with peripheral edema.

The main function of aldosterone is the regulation of serum sodium and potassium homeostasis while maintaining normal vascular fluid volume. When aldosterone levels increase, potassium is lost through the kidneys and sodium is retained. In causing sodium conservation, aldosterone indirectly causes conservation of water, which raises blood volume and increases blood pressure. This expansion of the extracellular fluid volume and the conservation of sodium leads to suppression of the RAS, decreased renin plasma levels and hypertension. Chronically elevated aldosterone levels may also contribute to the progression of kidney damage by promoting thrombosis and fibrosis. The disease occurs much more commonly in cats, and it is very rare in dogs. It has been reported in cats between six and 20 years of age. The main clinical signs are related to the hypokalemia and hypertension that occur with excessive aldosterone levels. Weakness and a polymyopathy causing cervical ventroflexion are commonly seen. Retinal detachments and blindness are also common clinical signs. Other less common clinical presentations include polyuria, polydypsia, polyphagia and (rarely) respiratory failure. Occasionally it is diagnosed in asymptomatic cats.

Diagnosing the disease can be challenging, as it is often overlooked in cases of unexplained hypertension or hypokalemia. Primary hyperaldosteronism should be considered as a differential diagnosis in middle-aged and older cats with hypokalemic polymyopathy and/or systemic hypertension. If the disease is suspected, an abdominal ultrasound should be performed. Unilateral

adrenal masses may be seen. More commonly, only very subtle changes in the adrenals compatible with nodular hyperplasia may be noted. Ideally, plasma aldosterone levels should be measured, and significant elevations are generally seen. In primary hyperaldosteronism with elevated aldosterone levels, there is a corresponding decrease in plasma renin activity, demonstrating a renin-aldosterone dissociation. This decreased plasma renin level in light of an elevated aldosterone level (or the plasma aldosterone/renin ratio) is the human standard for diagnosis. Unfortunately, there is no commercially available assay for plasma renin activity at this time in North America.

When hyperaldosteronism is diagnosed, treatment is either surgical removal of the affected adrenal gland if a tumor is present, or medical management. Medical management is the treatment of choice in bilateral adrenal hyperplasia, or when the cat's clinical condition makes surgery a poor option. Medical treatment is based on controlling the hypokalemia and hypertension. Initially, IV potassium chloride may be needed to correct the electrolyte abnormalities (not to exceed 0.5meq/kg/hr) in cases of severe hypokalemia. Once stable, oral potassium gluconate should be started at 2-6mg/kg/day. The dose may then be adjusted as indicated.

Hypertension is treated initially with Spironolactone (2-4mg/kg/day), a potassium-sparing diuretic. Spironolactone should be the treatment of choice, as it is a synthetic homologue and competitive antagonist of aldosterone. If further blood pressure control is needed, then amlodipine (0.625-1.25mg/day) can be added. The prognosis is variable, but some cats survive for years with just medical management.

The clinician should always consider hyperaldosteronism as a diagnosis in any middle-aged to older cat with hypokalemia (especially if associated with a polymyopathy) and/or systemic hypertension.

For more information, or to refer a client to the Internal Medicine service at Angell, please call Referral Coordinator Eleanor Cousino at 617 522-5011 or visit www.mspca.org/internalmedicine.

A Thank You from Behaviorist, Stefanie Schwartz

Dear Colleagues;

It is with mixed emotions that I am announcing I will be leaving Angell Animal Medical Center and relocating my practice to Maryland, effective immediately. It has been a great pleasure providing veterinary care for you over the years, and it is not easy for me to leave.

If you require ongoing case management I will be available on a limited basis for telephone consultations at 301 340-3224.

I have greatly valued our relationship and thank you for your loyalty and friendship over the years.

Sincerely,
Stefanie Schwartz, DVM, MSc, DACVB