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VIRGINIA-MARYLAND VETERINARY NOTES

Veterinary Teaching Hospital, Virginia-Maryland Regional College of Veterinary Medicine

October - December, 2007

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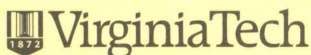
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Dr. Roberts Thought For the Month

Did you hear about the hypochondriac who went for a complete physical exam, got a clean bill of health and asked for a second opinion?

We all miss you Dr. Roberts



VIRGINIA POLYTECHNIC INSTITUTE
AND STATE UNIVERSITY

This newsletter is published quarterly in support of the outreach program of the Veterinary Teaching Hospital VMRCVM, Blacksburg, VA and is prepared for and distributed to veterinarians in the Mid Atlantic Region

Success Is No Accident

There is almost always a need for talented employees and dedicated team members in any business or endeavor. Such individuals are often in short supply when needed. How best to have people to staff our practices and do that above average job we want and need? Perhaps the best long term answer is to coach and mentor present staff members who have the desire to learn and become better, and better paid, employees.

Studies indicate that 70% of all employees are dissatisfied with their involvement in their present job. Usually they blame “the boss” or management in general. This typically can result in lowered productivity and absenteeism. These employees don’t feel they are valued and encouraged enough.

The quality of leadership is critical and directly linked to the quality of employees and their positive involvement in the business. Effective management spends a significant amount of time mentoring staff – helping them to do a better job. Developing talent invariably pays dividends, both long and short term. Talent must be recognized and nurtured. A helpful interest in promising individuals provides a positive and motivating environment. Providing the leadership that coaches employees to improve and make a greater contribution is a major factor in success.

Have you lost good employees because they weren’t helped and appreciated? Are your employees getting the help and encouragement they need? Are they learning and growing on the job? Are you truly interested in their success? Do you take time to ensure that success? Are you a good people manager? Time and effort spent in helping your employees can pay big dividends.

**Kent Roberts, DVM
Williamsburg, VA**

Pet Food Recall

Since the mid-March, the Food and Drug Administration has been working diligently to investigate the contamination of certain pet food ingredients with melamine and melamine-related compounds and to contain the distribution of the contaminated products.

Immediately after the FDA received the initial reports about the problem, it began an extensive program of recall coordination, inspections, and product tracking. FDA’s Office of the Commissioner, the Center for Veterinary Medicine, and the Office of Regulatory Affairs have been leading the effort. Within the Federal Government, FDA has consulted with the Centers for Disease Control and Prevention and the U.S. Department of Agriculture. Outside government, FDA has been working with universities, Banfield Pet Hospitals (a network of pet hospitals across the country), the Veterinary Information Network, the American Association of Veterinary Laboratory Diagnosticians, and other groups.

FDA has also taken extra steps to keep consumers informed and to be a source of up-to-date, reliable information. FDA continues to place as much information as possible on the FDA Web site, including a searchable database of all pet foods subject to the recall, so consumers can quickly determine what pet food is safe to use.

When the investigation is complete, *FDA Veterinarian* will present a full report of the recall.

In the meantime, interested stakeholders should continue to go to the FDA Web site for the latest information. (<http://www.fda.gov/ocoopacom/hottopics/petfood.html>) **Reported in FDA Veterinarian, 2007, Department of Health & Human Services, Rockville, MD**

New Drug to Treat Heart Failure in Dogs Gets OK

On May 16, 2007, the Food and Drug Administration announced the approval of the first drug to treat congestive heart failure in dogs in over 10 years. The product, Vetmedin® (pimobendan), is approved for managing the signs of mild, moderate, or severe (modified New York Heart Association [NYHA] Class II, III, or IV) congestive heart failure in dogs due to atrioventricular valvular insufficiency or dilated cardiomyopathy. Vetmedin® is indicated for use with concurrent therapy for congestive heart failure as appropriate on a case-by-case basis. The drug, which is sold by veterinary prescription in tablet form, helps alleviate the signs of heart failure by increasing contractility (the force of heart muscle contraction) and by dilating blood vessels (decreasing resistance to blood flow).

Veterinarians classify congestive heart failure according to clinical signs. Class II is mild (fatigue, shortness of breath, and coughing) and is apparent when ordinary exercise is exceeded. Class III is moderate (comfortable at rest, but exercise capacity is minimal). Class IV is severe (no capacity for exercise, and disabling clinical signs are present, even while at rest).

The safety and effectiveness of Vetmedin® were evaluated in a 56-day, multi-site, active controlled field study with pivotal success determined at day 29. A total of 355 dogs with modified NYHA Class II, III, or IV congestive heart failure due to atrioventricular valvular insufficiency or dilated cardiomyopathy were randomly assigned to either the Vetmedin® treatment group or the active control, Enacard® (enlamil maleate) treatment group. Treatment success in the first group (80.7 percent) was determined to be non-inferior to the treatment success in the second group (76.1 percent).

Vetmedin® is made by MEDA Manufacturing GmbH, Cologne, Germany, for Boehringer Ingelheim Vetmedica, Inc., of 51. Joseph, MO.

Adverse reactions associated with Vetmedin® (and Enacard®) were potentially related to congestive heart failure, the therapy of congestive heart failure, or both, and included poor appetite, lethargy, diarrhea, worsening signs of heart failure, heart failure death, increase in the blood urea nitrogen (azotemia), and mild increases in serum liver enzymes.

FDA's Center for Veterinary Medicine cautions that pimobendan is not intended for use in cats and is only for use in dogs that are diagnosed as explained above. Vetmedin® acts to alleviate the clinical signs of congestive heart failure, rather than to reverse the underlying cardiac pathology. It does not replace the need for other appropriate concurrent heart failure therapy, which includes the use of diuretics and anti-arrhythmic drugs.

Walt D. Osborne, M.S., J.D., Assistant Editor, as reported in FDA Veterinarian, 2007, Department of Health & Human Services, Rockville, MD

Would You Believe?

Including all areas, we spend more than \$500 billion annually on public education in the U.S. Teachers earned \$34.06 per hour in 2005. Detroit leads the nation with public school teachers averaging \$47.28 per hour, while New York City pays an average of \$45.79 and Los Angeles pays \$44.03.

Bureau of Labor Statistics

Infant Death Demonstrates *Salmonella* Risk From Turtles

The death of a 4-week-old infant in Florida earlier this year demonstrated the risk of salmonellosis from baby turtles.

Scientists were able to match the strain of bacteria that made the infant sick with the strain found in a baby turtle in the house in which the infant had lived. Scientists were able to "fingerprint" the *Salmonella*, and they identified it as *Salmonella* Pomona.

The Food and Drug Administration banned the sale of baby turtles, except for certain educational purposes, in the

The Food and Drug Administration banned the sale of baby turtles, except for certain educational purposes, in the 1970s as a means to prevent children from becoming ill with salmonellosis. The prohibition applies to turtles with shells (carapace) of 4 in. or less. These turtles were often given to children for pets and are small enough so that children often handle them or put them in their mouths, which is how *Salmonella* transfers from the turtles to children.

Baby turtles are a natural source of *Salmonella*, which are a group of bacteria that can cause salmonellosis. *Salmonella* are often found on the shell or skin of the turtles.

The symptoms of salmonellosis include diarrhea, stomach pain, nausea, vomiting, fever, and headache.

Not only infants, but also children, the elderly, and anyone with a lowered resistance to disease (due to pregnancy, cancer, chemotherapy, organ transplant, diabetes, liver problems, or other problems) are at risk of serious disease and even death from salmonellosis.

FDA is reminding consumers not to purchase small turtles as pets. Consumers should thoroughly wash their hands after handling any turtle.

Reported in FDA Veterinarian, 2007, Department of Health & Human Services, Rockville, MD

CVM Approves Drug to Treat Obesity in Dogs

The Center for Veterinary Medicine in early January 2007 approved the first-ever drug for the management of obesity in dogs in the United States. The product is Slentrol™ (dirlotapide), and the sponsor is Pfizer, Inc., New York, NY. The product will be available only by prescription from a veterinarian.

The drug is given to the dog in varying amounts over the course of the treatment. The dog is given an initial dose for the first 14 days. After that, the veterinarian will assess the dog's progress at monthly intervals, adjusting the dose depending on the dog's weight loss. After the dog has achieved the goal weight, the drug's manufacturer recommends continued use of the drug during a 3-month period, while the veterinarian and dog's owner establish the optimal level of food intake and physical activity needed to maintain the dog's weight.

Slentrol™ is a new chemical entity. It is a selective microsomal triglyceride transfer protein inhibitor that blocks the assembly and release of lipoproteins into the bloodstream. Scientists do not completely understand the drug's mechanism for producing weight loss, but it seems to result from reduced fat absorption and by providing a satiety signal from lipid-filled cells lining the dog's intestine. Adverse reactions include vomiting, loose stools, diarrhea, lethargy, and loss of appetite.

The product is not for use in humans. It carries the standard warning "Not for use in humans. Keep this and all drugs out of reach of children." The labeling also cites adverse reactions associated with human use, including abdominal distention, abdominal pain, diarrhea, flatulence, headache, nausea, and vomiting.

Many dogs in the United States are overweight and obese. Veterinarians generally agree that dogs weighing 20 percent more than ideal weight are obese.

Reported in FDA Veterinarian, 2007, Department of Health & Human Services, Rockville, MD

USDA Conditionally Approves First Therapeutic Vaccine to Treat Canine Melanoma

Merial has recently been issued a conditional V.S. Veterinary Biological Product License for a vaccine to treat canine melanoma. This is the first time that the U.S. government has approved a therapeutic vaccine for the treatment of cancer in either animals or humans. The conditional license stems from an application and assurance of safety and purity - plus a reasonable expectation of efficacy - based on initial trials performed at the Memorial Sloan-Kettering Cancer Center (MSKCC) and the Animal Medical Center of New York.

In these trials, nine dogs with advanced malignant melanoma were given four biweekly injections of human tyrosinase DNA vaccine. The animals were injected with the vaccine using the Biojector-2000, which has no needle. They showed no side effects or toxicities and experienced only a mild inflammatory reaction observed at the injection site. Two dogs showed no evidence of disease when they were examined after completing the vaccine regimen. Four dogs survived for over 400 days, with the longest survivor still alive after more than 615 days. The median survival time was 389 days. The prognosis of advanced canine malignant melanoma (CMM) in the general pet population is usually a 60 to 90 day median survival time.

Human tyrosinase, which is a melanoma tumor protein, is the antigenic (efficacy) portion of the vaccine. The DNA coding or gene for the production of human tyrosinase is inserted into a plasmid. When these genetically manipulated plasmids contained in the vaccine are injected into a melanoma-affected dog, the animal produces human tyrosinase. An immune response is stimulated against canine melanoma cells, which contain tyrosinase. Four inoculations every two weeks are initially given, followed by a booster inoculation every six months.

CMM is an aggressive form of cancer that typically appears in a dog's mouth, but also may appear in the nail bed, foot pad, or other areas. It is the most common oral cancer in dogs and accounts for one out of 20 diagnoses. CMM is most successfully treated by surgery in its early stages. To date, surgery, radiation, or chemotherapy have not been very effective after a diagnosis in the later stages of CMM and/or if there has been metastasis to other organs.

The vaccine will initially be available for use by b) specialists practicing veterinary oncology, so pet owners will want to ask their veterinarians about how to access this treatment option. During the period of the conditional licensure, Merial will conduct additional: research to support further the safety and efficacy of this vaccine.

Texas Cooperative Extension Service Veterinary Quarterly Review, Vol. 23. No.1, Spring 2007, Pg. 4-5., as reported in Vet Notes, Third Quarter, 2007, Animal & Range Sciences Department, NDSU, Fargo , ND

Commuting

The winner of the Midas (muffler) Award for America's longest commute was won by a California engineer who travels 372 miles round trip (seven hours) to work in San Jose.

Four hour round trip commutes are not unusual these days. It is estimated that one of every six American workers commute 90 minutes or more round trip to and from their job. The number of these "extreme commuters" has reached 3.5 million – the fastest growing category in the ever widening sprawl of suburbia.

Average Commuting Time

USA	51 minutes
Bangkok	2 hours
Japan	90 minutes

9 out of 10 commute by car and of these 88% drive alone

Of Atlanta's commuters, 94% travel by car. They have the highest annual gasoline costs per capita of any U.S. city. Atlanta grew faster during the 1990's than any other American city.

Cat Heartworm Infection Guidelines Updated, New Syndrome Defined

The American Heartworm Society released the 2007 Guidelines for the Diagnosis, Prevention, and Management of Heartworm Infection in Cats. The most notable update was the inclusion of information on the newly defined heartworm-associated respiratory disease (HARD).

According to the AHS, some cats never develop clinical signs of heartworm infection, but even a small number of worms can be life-threatening. When signs are evident, they usually develop either in the first stage when the heartworms enter a blood vessel and are carried to the pulmonary arteries, or in the second stage when the adult heartworms die.

The AHS reported that the signs associated with the first stage are often misdiagnosed as asthma or allergic bronchitis when, in fact, they are actually a result of HARD.

The second stage often leads to fatal acute lung injury. Another highlight of the updated guidelines is information on interpreting serology test results.

According to the AHS, heartworm infection is harder to diagnose in cats than in dogs, and it is easy to overlook. Diagnostic tests have limitations, so test results negative for heartworms do not necessarily rule out an infection. Antigen tests, for example, detect only adult female or dying male worms. Immature or male-only worm infections are rarely detected. **Reported in Vet Notes, Third Quarter, 2007, Animal & Range Sciences Department, NDSU, Fargo , ND**

Pulsus Alternans in English Cocker Spaniels with Dilated Cardiomyopathy

Objectives - To report the clinical findings associated with pulsus alternans in English cocker spaniels with dilated cardiomyopathy and to review the phenomenon of mechanical alternans, usually found in patients with severe left ventricular systolic dysfunction.

Methods - The case records of 10 English cocker spaniels with dilated cardiomyopathy and pulsus alternans were reviewed. All dogs had been referred in moderate to severe congestive heart failure. Pulsus alternans was clinically recognized by palpation of a regular alternation of femoral pulse amplitude and confirmed by echocardiography in all cases. Pulsus alternans was an intermittent finding in all 10 dogs.

Results - Phonocardiographic recordings were obtained in three dogs to document variation in the intensity of the heart sounds, with one case exhibiting absence of the second heart sound in alternate beats. M-mode echocardiography performed in all dogs showed alternation of the pattern of mitral valve diastolic motion. Doppler echocardiography showed marked alternation in stroke volume in the aortic outflow in all cases. It also showed alternation in mitral regurgitation and in the velocity of early ventricular filling.

Clinical Significance - Pulsus alternans may be more prevalent in English cocker spaniels than in other breeds, and because of its intermittent nature, its incidence may be higher than that previously reported. It has diagnostic relevance as it usually indicates severe myocardial depression. Echocardiography allows non-invasive detection of mechanical alternans and provides further insights into its pathophysiology and clinical significance.

A. Moneva-Jordan, Calder Veterinary Hospital, UK, V. Luis Fuentes, The Royal Veterinary College, UK, B. M. Corcoran, University of Edinburgh, UK, A. French, Royal (Dick) School of Veterinary Studies, UK, J. Dukes-McEwan, University of Liverpool, UK. Journal of Small Animal Practice, Volume 48 Issue 5, May 2007, Pages 258-263, as reported in Penn State Veterinary News, April-June 2007, Penn State University, University Park, PA

Typhoon Cobra

On December 17, 1944 the U.S. Navy's Task Force 38 was operating 300 miles east of Luzon in the Philippine Sea with seven fleet aircraft carriers, six light carriers, eight battleships, 15 cruisers and 50 destroyers. During refueling operations the weather worsened rapidly and the operations were stopped as barometric pressure dropped and wind speeds of up to 120 knots hit the Task Force.

Damage to the ships of the Task Force was substantial. Some experienced rolls of up to 70 degrees, and three destroyers (USS Spence, Hull and Monaghan) were sunk by the wind and heavy seas. In addition, a total of 790 lives were lost and nine ships were damaged severely and had to return to port for repairs. At least 146 aircraft on the carriers were wrecked or blown overboard.

The Task Force commander, Admiral Chester Nimitz, stated that the typhoon dealt his ships a "crippling blow", scattering the fleet over a wide area. Search and rescue efforts found 92 survivors from the lost destroyers.

The storm dissipated on December 18 and the remaining ships of the Task Force regrouped and moved on as best they could.

Remember our troops of yesterday, and pray for our troops of today and tomorrow.

Continuing Education Opportunities

There are many opportunities for Continuing Education for veterinarians and veterinary technicians in the United States today. The faculty at the Virginia-Maryland Regional College of Veterinary Medicine are dedicated to delivering the most in-depth and personal educational experience possible. While there are other less expensive programs that can meet one's Continuing Education requirements, we make a point of limiting our courses to small groups so that each participant can get more personal instruction from our faculty instructors.

If you have any questions about any of our course offerings, please feel free to contact:

Anne Cinsavich, L.V.T.
VMRCVM Continuing Education Coordinator
Phone: 540-231-5261
e-mail: aclapsad@vt.edu

Date	Topic	Location	Contact Hours
October 6, 2007	Digital Radiography	Blacksburg	7
December 17 – 19, 2007	Soft Tissue Surgery	Blacksburg	24
Coming in 2008	Orthopedic Surgery	Blacksburg	24
Coming in 2008	Gastrointestinal Endoscopy	Blacksburg	24

Please note:

The courses listed above are limited enrollment and feature a hands-on laboratory experience under the guidance of clinical faculty members. Program brochures provide course details. For more information, please contact Anne Cinsavich, aclapsad@vt.edu (540) 231-5261 or visit our web site

<http://www.vetmed.vt.edu/Organization/OutReach/outreach.asp>.

To register for a program, please contact Conference Registration, Continuing Education Center, (540) 231-5182.

Virginia-Maryland Regional College of Veterinary Medicine Extension Staff:

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Dr. Scott Pleasant

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Anne Cinsavich

Continuing Education/Extension

Anne Cinsavich, Editor and Production Manager of VIRGINIA –MARYLAND VETERINARY NOTES

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