



VIRGINIA VETERINARY NOTES

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THOUGHT FOR THE MONTH

The difficulty lies not in new ideas, but in escaping from old ones. --J.M. Keynes

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OCT 5 1994

BLACKSBURG, VA

Kent C. Roberts

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INTRALESIONAL IMPLANT FOR TREATMENT OF PRIMARY ORAL MALIGNANT MELANOMA IN DOGS

Twenty dogs with oral malignant melanoma were treated with a new method of local, sustained-release chemotherapy by use of intralesional cisplatin implants. The implant was an injectable viscous gel composed of a protein carrier matrix, a vasoactive modifier, and an anticancer drug. Melanomas in 14 of 20 dogs has a > 50% decrease in tumor volume, and in 11 dogs, had complete response after a mean cisplatin dose of 11.7 ± 1.8 mg, delivered in a mean of 2.6 implants. Medial survival time of dogs with complete response was substantially longer than that of nonresponders (51 vs 10.5 weeks). Mandibular tumors of short duration were more likely to respond, as were tumors treated with a greater number of implants in a consistent weekly treatment course. Implants were well tolerated, and are a technically feasible potential alternative to surgery and radiation for local control of oral melanoma in dogs. --**Veterinary Notes II, North Dakota State University Extension Service, Vol. 3, No. 4, April 1994, as reported in Animal Health Beat, Nevada Cooperative Extension, Vol. 10. No. 4.**

VITAMIN D TOXICOSIS IN LAMBS FED LAMB MILK REPLACER

Four lambs between 1 and 4 weeks old were presented for signs of weakness and ill-thrift. The lambs either could not stand and/or could not walk. The lambs were bright, alert, and had good appetites. Total serum calcium levels were elevated, ranging from 16.5 to 30 mg/dl. Control lambs from the university flock had total serum calcium levels of 10.45 to 12.46 mg/dl. All affected lambs had been receiving lamb milk replacer fed per label directions. Three of the affected lambs had previously received vitamin E/selenium injections. Vitamin D levels were evaluated in two of the lambs and two control lambs from the university flock. The vitamin D (25-hydroxy vitamin D) levels in the affected lambs were 154 and 174 nmol/L, whereas the levels in the control lambs were 9 and 20 nmol/L. The milk replacer (from a reputable company) was the only common source of vitamin D among the 4 lambs. Three of the lambs were then placed on kid milk replacer and all 3 lambs recovered within 3 days. Total serum calcium was reevaluated in two of the recovered lambs and was within normal limits. Vitamin D toxicosis should be suspected in weak or downer lambs that are being fed lamb milk replacer. The total serum calcium should be evaluated, and if elevated, another milk replacer should be used. --**Jerry R. Roberson, DVM, PhD, Production Management Medicine, VMRCVM, Blacksburg, VA.**

ENVIRONMENTAL BENEFITS OF LAWNS

Lawns provide us with a number of environmental benefits, most of which we simply take for granted. These include:

- the cooling effect of an average size lawn is equal to about 9 tons of air conditioning, greater than a typical home's central air conditioning unit.
- turfgrass traps much of an estimated 12 millions tons of dust and dirt released annually into the U.S. atmosphere.
- healthy, dense lawns can absorb rainfall six times more effectively than a wheat field and four times better than a hay field.
- up to 90 percent of the weight of a grass plant in its roots, making it very efficient in stabilizing soil and preventing erosion.
- a turf area just 50 feet by 50 feet absorbs carbon dioxide, ozone, sulfur dioxide and other gases and releases enough oxygen for a family of four.
- athletic fields covered with natural turf have proven to be safer than artificial turfs.

--**Ecological TurfTips To Protect the Chesapeake Bay, Nutrient Management for Lawn Service Companies. James H. May, David R. Chalmers, John R. Hall III, Virginia Cooperative Extension, Virginia Tech, Blacksburg, VA.**

HANTA VIRUS

Human infection correlates with contact from rodents or rodent byproducts. Infected rodents don't seem to be affected but excrete the virus in their urine, feces, and saliva for extended periods. People inhale aerosolized particles of these byproducts or are bitten by an infected rodent. No person-to-person transmission or arthropod vector had been shown.

Signs of infection in humans are fever, muscle aches, and respiratory distress, which can progress to death from lung failure in a short time. Acute Respiratory Distress Syndrome (ARDS) takes thousands of lives each year. Some of these are probably related to Hanta Virus infection.

The virus was isolated in 1976 from a field mouse in the Hantaan River region of Korea where the disease is common. The virus has been found in infected rats in several major U.S. cities from Baltimore to Honolulu. Korean Hemorrhagic Fever affects thousands of Koreans and Chinese each year. A Belgrade virus strain is particularly virulent throughout the Balkans.

As of June 15, 1994, 75 cases of Hanta Virus infection had been reported in this country. New Mexico (20 cases) and Arizona (12 cases) were the states confirming the most cases. Florida and Rhode Island (with one case each) were the only eastern states reporting cases.

A vaccine has been developed which works in animals and is ready for human trials, probably in China. --**Dr. Thomas E. Hamm, Jr, Director of Lab Animal Resources, North Carolina State University, Raleigh, NC.**

NIGHT FLIGHT COLLISIONS

On the morning of September 17, 1992, an estimated 400 songbirds were found dead in parking lots and other brightly illuminated areas in Gatlinburg, TN. A dense fog had occurred the previous night, and most of the carcasses were discovered around light poles. At least 25 species were involved, including several species of warblers, as well as thrushes, gray catbirds, and red-eyed vireos. A subsample of these birds necropsied had traumatic injuries compatible with in-flight collisions.

Such dramatic bird mortality events due to collisions with man-made objects are not uncommon. The U.S. Fish and Wildlife Service's National Wildlife Health Research Center reported a similar event that occurred in Madison, Wisconsin in September 1989. An estimated 250 birds were involved, including many of the species listed above. Even larger numbers have been documented in Northern Florida where a tall TV station tower was monitored daily for 25 years. At least 42,384 birds representing 189 species were killed by collisions with the tower and its guy-wires. In 2 single October nights, kills of 2,325 and an estimated 4,000-7,000 birds of over 60 species were reported. The vast majority of losses occurred during spring or fall migrations. Vireos, warblers, thrushes, and some of the finches and allies were especially numerous in the collections.

Telecommunications towers, street lights, buildings, bridges and airport ceilometers are among the structures recorded as sites of large bird mortality events. Such large kills involve 2 common factors:

1. The occurrence of frontal or storm systems, often accompanied by rain, mist, or fog and
2. The presence of artificial lighting. These factors apparently combine to produce a disorienting effect on birds, causing them to collide with the tall, lighted objects as well as with lower unlighted objects or the earth in the vicinity of the lights. The total impact of structure collisions on songbirds populations is unknown, but considering the vast numbers of man-made items, further study may be warranted.

--As stated in the **Southeastern Cooperative Wildlife Disease Study, College of Veterinary Medicine, The University of Georgia, Volume 8, Number 4, January 1993.**

A NEW DRUG TO TREAT FELINE MEGACOLON

Cisapride (Propulsid, Janssen Pharmaceutica Inc.) is one of a new class of prokinetic agents that can be used to treat a wide range of gastrointestinal motility disorders. It has been available outside the United States for several years and was approved for use in humans by the Food and Drug Administration in October 1993.

Cisapride is a substituted piperidinyl benzamide that is chemically related to metoclopramide. Unlike metoclopramide, which antagonizes the inhibitory effects of dopamine and can cross the blood-brain barrier, cisapride has no effect on the central nervous system but increases the release of acetylcholine from postganglionic nerve endings of the myenteric plexus. This leads to improved propulsive motor activity of the esophagus, stomach, and small and large intestine. Cisapride has no known direct antiemetic properties and few side effects.

Although clinical experience will reveal the spectrum of therapeutic benefits for cisapride in veterinary medicine, early experience and anecdotal reports from Europe and Canada concerning this drug are encouraging. One of the most important uses for cisapride will be in the treatment of megacolon in cats. Megacolon with secondary obstipation can be a very frustrating disease to treat. Fecal consistency can be normalized with a titrated dose of lactulose, but getting the colon to contract and expel its content has proved incredibly difficult. Treatment with cisapride has changed this and, in combination with lactulose, has made for a lot of happy cats and owners.

Cisapride can also be used to treat reflux esophagitis, gastroparesis, and postoperative ileus. I have also been told that the drug seems to reduce regurgitation in patients with megaesophagus. Cats with hairballs, which are mainly the result of primary gastroparesis or are caused by secondary motility disorders associated with inflammatory bowel disease, might also respond to treatment with cisapride. Obviously, controlled clinical trials are needed to determine the efficacy and safety of this new drug.

Cisapride is supplied as 10-mg scored tablets. Initial experimental trials indicate that a dose of 0.5 mg/kg bid to tid is adequate. This translates into 2.5 mg bid to tid for most cats. --Reprinted with permission from *Alpo Viewpoints in Veterinary Medicine* (vol 4, No. 1, January 1994) "Cisapride: A Boon for the Small Animal Practitioner" written by Dr. Colin F. Burrows, as reported in *Feline Health Topics*, Spring 1994, Feline Health Center, Cornell Univ., Ithaca, NY.

DIFFERENTIAL DIAGNOSIS - FELINE INFLAMMATORY BOWEL DISEASE

Parasitic infections

Giardiasis
Toxoplasmosis

Bacterial Diseases

Campylobacter jejuni
Salmonella sp.
Mycobacteria

Fungal Diseases

Histoplasmosis

Viral Diseases

Feline immunodeficiency virus
Feline leukemia virus
Feline infectious peritonitis

Food allergies

Neoplasia

Lymphosarcoma
Adenocarcinoma

Hyperthyroidism

Bacterial overgrowth

Excessive pancreatic insufficiency

Intestinal obstruction

Functional bowel disorder

FELINE INFLAMMATORY BOWEL DISEASE
Clinical Signs and Diagnostic Features of Three Types of IBD

Form of IBD	Clinical Signs	Diagnostic Features
<p>Lymphocytic-plasmacytic enterocolitis (LPE) <i>(*most common form in cats)</i></p>	<p><u>Vomiting</u>: Vomitus is usually clear, bilious fluid or foamy. Vomiting begins acutely, but usually is unrelated to timing with eating. <u>Diarrhea</u>: Small bowel diarrhea varies from soft and semiformed feces to profuse watery diarrhea. Large bowel diarrhea is characterized by frequently of defecation, urgency, tenesmus, increased fecal mucus and hematochezia. <u>Weight loss</u>: Physical wasting and malnutrition occurs from progressive weight loss.</p>	<p>Routine <u>hematologic and serum biochemistries</u> are usually normal. Although some cats may have nonspecific laboratory abnormalities (mild anemia, stress hyperglycemia, hyperglobulinemia and occasional hypoalbuminemia, hypokalemia, mildly elevated enzymes). <u>Radiographic and ultrasonographic</u> features are unremarkable. <u>Endoscopically</u>, the GI mucosa may appear normal or have any of the following abnormalities: erythema, increased friability, increased surface granularity, thickening and increased folding, erosion/ulcers, or indistensibility. <u>Histopathology</u> of the lesion shows diffuse infiltration of lamina propria with mature lymphocytes and plasma cells with mucosal damage.</p>
<p>Eosinophilic enteritis <i>(*affects middle-aged to older cats; relatively uncommon form)</i></p>	<p><u>Vomiting</u>: Vomitus may contain blood from mucosal erosions. <u>Diarrhea</u>: Small bowel involvement can cause malabsorption with watery diarrhea and weight loss. Large bowel involvement may cause mucoid diarrhea. Diarrhea may be bloody.</p>	<p><u>Hematology and serum biochemistries</u>: WBC shows a persistent severe eosinophilia exceeding 1,5000 cells/?l. <u>Endoscopic</u> findings are similar to LPE, except that mucosal ulceration is more common. Some cats have an extensive intramural band of fibrosis of the lesion.</p>
<p>Regional granulomatous enterocolitis <i>(*rare)</i></p>	<p><u>Diarrhea</u>: Chronic large bowel diarrhea that contains mucus and fresh blood. Sometimes it is accompanied by tenesmus and abdominal pain. <u>Weight loss, anorexia or depression</u> may also occur.</p>	<p><u>Hematology</u> may show neutrophilia. <u>Ultrasonography and barium contrast radiography</u> may identify a stenosed thickened region of bowel. Primary <u>histopathologic</u> feature is transmural granulomatous inflammation, fibrosis, ulceration, and aggregates of epithelioid cells, giant cells and eosinophils are often found deep in the lesions.</p>

**CONTINUING EDUCATION OPPORTUNITIES
Fall 1994**

<u>Date</u>	<u>Subject</u>	<u>Location</u>	<u>Contact Hours</u>
+September 22	Small Animal Medicine Update	Charlottesville	4
*September 23-24	Orthopedic Surgery of the Canine Hindlimb	Blacksburg	10
*September 30 - October 1	Gastrointestinal Endoscopy (Intermediate)	Blacksburg	10
*October 14-15	Practical Eye Surgery	Blacksburg	10
*October 28-29	Neurology For Practitioners	Blacksburg	10
*November 4-5	Clinical Canine Reproduction	Blacksburg	9
*December 2-3	Acute Abdomen (Small Animal)	Blacksburg	10
*December 9-10	Small Animal Dentistry	Blacksburg	10

*Limited enrollment course
+Open to veterinary technicians

Note: Program brochures are mailed out six-eight weeks prior to the course date. No registrations accepted until brochures go out. For further information, please contact:

Kent Roberts, DVM
VMRCVM - Virginia Tech
Blacksburg, VA 24061-0442
703-231-7181

SOUTHERN VETERINARY MEDICAL FEDERATION

The 77th Annual Convention of the Southern Veterinary Medical Federation will convene in Memphis, Tennessee October 16-19, 1994, at the Peabody Memphis. Continuing education offerings include 32 hours for veterinarians, six hours for technicians, and six hours on management. Featured speakers include: Robert Paddleford, Ronald Green, Mary Glaze, Michael Engel, Steven Swaim, and Mark Opperman. For information, write SVMF, P.O. Box 1695, Cashiers, NC 28717; or call (704) 743-5754.

CHRONIC IDIOPATHIC LARGE BOWEL DIARRHEA STUDY

Clinicians at the College of Veterinary Medicine at Virginia Tech are studying the effects of dietary fiber in dogs with idiopathic large bowel diarrhea. Approximately five more cases are needed to complete the study which is a randomized, controlled, double-blind effort to provide accurate data on the effects of fiber supplementation. The response to the first request in May was gratifying.

Please consider referring dogs with chronic large bowel diarrhea for diagnosis and inclusion in the study. The dog must have signs of diarrhea for at least 4 weeks. A week is defined as at least two days with diarrhea and the weeks don't have to be continuous. Signs of large bowel diarrhea include: mucus, frank blood, tenesmus, moderate to severe increased frequency and decreased volume. Dogs with weight loss cannot enter the study, and dogs must be dewormed prior to referral.

Dogs referred for the study will receive a full diagnostic workup, including coloscopy and biopsy. If another disease is discovered (inflammatory bowel disease, neoplasia, histoplasmosis, etc.), the client is responsible for 50% of the total charges, usually about \$200. If the dog is accepted for the study, it will enter the diet trial and the entire bill for diagnosis will be paid by the study. Dogs in the study will eat one of three diets for a six-week period.

Please call Dr. Michael Leib at (703) 231-4621 and refer any cases you think qualify.

MAILING LIST UPDATE

Dear Colleagues:

In our continuing efforts at maintaining a current and accurate mailing list for this newsletter, I request that you take a minute to update us on any changes in address, name, practice, etc.

If you no longer wish to receive the newsletter or know of a colleague who would like to be added to our mailing list, please fill out and return the form below at your earliest convenience.

We appreciate your interest in the College and the newsletter, and welcome your constructive comments.

Sincerely,

Kent Roberts, DVM, Editor

Name _____

New Address

Old Address

Practice Name (if applicable) _____

Please discontinue mailings _____

Name _____

Comments _____

It is a great help to us if you include Virginia Veterinary Notes when notifying people of an address change.

Please mail to:
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