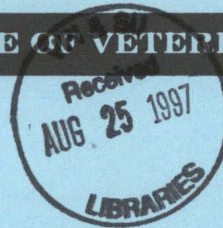




VIRGINIA VETERINARY NOTES

VIRGINIA-MARYLAND REGIONAL COLLEGE OF VETERINARY MEDICINE



October - December 1996

No. 81

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Kent Roberts

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 Extension Veterinarian



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.



TERMINATION OF UNWANTED PREGNANCIES IN THE CANINE

Termination of unwanted pregnancies is dealt with on a day-to-day basis in small animal clinics. There are several options available for termination of unwanted pregnancies. The key to successful terminations relies heavily on timing and client communication. The most effective way to terminate a pregnancy and to prevent future pregnancies is ovariohysterectomy. However, this may not be an option for potential breeders. The following are medical options for terminating pregnancies.

Estradiol cypionate (ECP, Upjohn) 0.02 mg/kg IM

This must be given while the bitch is still in estrus or in the first days of diestrus. Stage of estrous cycle should always be confirmed because of the potential side effects.

Prostaglandins (PGF_{2a}; Lutalyse, Upjohn) 0.25 mg/kg SQ BID for 4 days

This should be started after day 5 of diestrus

Bromocriptine (Parlodel, Sandoz) 20 to 30 mcg/kg BID for 4 days

This should be started after week 6 of pregnancy.

Dexamethasone 5 mg IM BID for 10 days

This should be started after day 30 of pregnancy

All of these have side effects, some of which may even be potentially life threatening. The client should always be aware of the side effects and the fact that the treatment may not always be 100% effective. Determination of state of cycle should always be confirmed prior to treatment by vaginal cytology or progesterone testing. These treatments could be followed up with serum progesterone levels to determine efficacy. --Prepared by Dr. Lori Williams, Mississippi State University Animal Health Spectrum, June 1996, as reported in Veterinary News, Aug 1996, Penn State University, University Park, PA.

DO'S AND DON'TS ON DIAGNOSTIC SUBMISSIONS

1. As a rule of thumb, submission of refrigerated, fresh tissue is never wrong. Freezing can destroy some bacterial pathogens and decrease virus concentration.
2. Identify each tissue and/or culture site.
3. Send each tissue in a separate container.

Exceptions:

- A. For virus isolation:
 - 1) lung, kidney, and spleen can be pooled
 - 2) intestinal sections can be pooled
 - 3) lung, tracheal mucosa, and mediastinal lymph nodes can be pooled
 - 4) brain sections can be pooled
 - B. For histopathology, generally tissues can be pooled
4. Tie off intestinal sections.
 5. Make sure containers are leak proof.
 6. Fresh and formalized tissue should be double packed to prevent leakage and, in the event of leakage, they should be surrounded by an absorbent material such as vermiculite.
 7. Leakages can damage writing on submission forms, so it is best to put submission sheets in an enclosed plastic bag separate from the tissues.
 8. Even when submitting only one case, always label the containers as to ownership to prevent possible mix-ups at the laboratory.

--Illinois Veterinary Bulletin, May 1996, as reported in Veterinary News, Aug 1996, Penn State University, University Park, PA.

LARGE BOWEL TRANSIT TIMES USING RADIOPAQUE MARKERS IN NORMAL CATS

Understanding normal bowel function is important in defining causes of constipation. Distinguishing between delayed colonic propulsion and outlet obstruction is essential to arrive at a sound medical or surgical treatment. Idiopathic megacolon associated with chronic constipation is a clinical problem of cats. This study established large bowel transit times in normal cats and provided the basis for similar evaluations in constipated cats. The technique used radiopaque markers in a method that could be employed easily in a general veterinary practice.

Several normal, young adult female cats each had its colon evacuated with warm-water enemas before oral administration of a gelatin capsule containing 20 radiopaque markers. Abdominal radiographs were taken twice daily until all markers were expelled. Markers accumulated in the first section of the large bowel within eight hours. Evaluation from the colon took another 40 hours.

--Valerie Fucci et al., *JAAHA* 31 (6); Nov/Dec 1995, as reported in *Veterinary News*, Aug 1996, Penn State University, University Park, PA.

TICK-BORNE ILLNESSES

Anecdotal evidence indicates that the number of ticks in Virginia has been unusually high this spring. Although monitoring for the number of ticks is not routinely done, experts at Virginia Tech report that the environmental conditions during 1996, including heavy snowfalls and a wet spring, favored increased tick populations. This increase in the tick population may result in an increase in the number of cases of tick-borne illnesses. Physicians who suspect that a patient may have a tick-borne disease may send serum specimens to the state immunology laboratory for testing for Rocky Mountain spotted fever and Lyme disease. The state laboratory will also forward specimens to the CDC for testing for both types of human ehrlichiosis. Please call the Immunology Lab at the state laboratory (804/786-5142) for further information.

REDUCTION OF PROPTOSED EYES USING DMSO

The author has successfully reduced over 20 proptosed eyes using DMSO and finds it to be invaluable. After stabilization of the patient with routine cleansing and protection of the proptosed globe, the eye is gently irrigated with DMSO using a 12 cc syringe. The reduction in size due to DMSO, coupled with proper technique for reduction, has allowed the author to reduce all but one globe without the need for incising the lid margins. The cornea does not appear damaged by DMSO and there appears to be minimal discomfort. --*Veterinary Notes II, North Dakota State University Extension Service, Vol. 4, No. 10, October 1995*, as reported in *Animal Health Beat, Vol. 12, Issue 7, July 1996, University of Nevada - Reno*.

FARMS IN VIRGINIA

From 1982 to 1992, the numbers of farms in Virginia decreased by nearly 19 percent. Those remaining have tended to increase in size on average from 182 acres to 196 acres. The market value of farm land increased throughout the state and six counties had increases of over 100 percent: Alleghany, Frederick, Greene, Rappahannock, Spotsylvania, Stafford. The number of nursery and greenhouse farms increased as did the number of poultry operations state wide.

A farm is defined by the Bureau of the Census as any operation generating at least \$1000 of agricultural sales in the year of the census. Farm sales increased statewide during the ten year period 1982-92, particularly in the number of farms with annual sales greater than \$250,000. --*The State of Rural Virginia, Vol. 4, No. 1, Spring 1996, College of Agriculture and Life Sciences, VPI & SU*.

ICE WORKS WONDERS

"Treat her nice and pack her with ice" is the motto Dave Horn, DVM, goes by when dealing with post partum dairy heifers. Horn, of Battenkill Veterinary, Middle Falls, N.Y., has developed a simple yet effective way to ease the uncomfortableness of a difficult calf delivery. He says often the day after delivering a calf the heifer's vulva may be swollen and she may be uncomfortable and straining. Sometimes, too, she will have torn herself and will have necrotic tissue forming. Noting that ice often was used as a compress in human medicine to take down swelling after deliveries, Horn thought the same principle could be applied to cows.

His method is to take a clean palpation sleeve and fill it with snow or ice, depending on the time of year, and place it inside a heifer's birth canal after delivery. "You knot the sleeve, then tie a piece of twine in front of the knot and then to her tail so the bag won't slip too far in," Horn explains. "If a heifer is lying down, you can put a bale of hay behind her so she won't push it out." After the first bag has melted in 15 to 20 minutes, Horn likes to put one more in. "You need to pack the sleeve as tight as you can with snow or ice," he says. "Don't worry how big it makes the sleeve - remember, she just delivered a 100-pound calf."

Horn has found that by using the snow or ice the post partum bleeding slows or stops, the swelling is markedly reduced and the next day the heifer will be up and around without the stiffness and soreness that comes with pulling calves. Horn says his clients are getting used to his method and often they'll be ready with a bucket of ice when he arrives to pull a calf. "It's also useful for uterine prolapses," he says. "When a cow prolapses, part of the uterus cuts off the blood supply and there's a lot of swelling, uncomfortableness and straining." He adds that the ice may help promote the passing of the placenta due to vasoconstriction. In the three years Horn has been using the ice-packed sleeves he's seen no problems. "I promote cleanliness and lubrication in bovine obstetrics and try to make it as clean as possible." --DVM News Update for Veterinarians in the Upper Midwest, SDSU Veterinary Extension. Vol. 10, No. 1, Jan/Feb 1996, as reported in Animal Health Beat, Vol. 12, Issue 7, July 1996, University of Nevada - Reno.

ADVERSE REACTION TO TILMICOSIN IN GOATS

A private practitioner was called to examine ten adult goats following their purchase, two days previously, from a local stock yard. The animals appeared somewhat unthrifty and had nasal discharges. The animals were treated for parasites with ivermectin and for the apparent upper respiratory tract infection with tilmicosin. This antibiotic was selected because of its long duration of activity following a single dose treatment of cattle. Within 30 minutes of injection 3 of the animals died. These 3 were all of apparent Alpine stock. The remaining animals showed no apparent ill effects. The Poison Control Center at the University of Illinois, 800/548-2423, (\$30 charge may apply or 900/680-0000 with a charge of \$20 for the first 5 minutes and \$2.95/min thereafter) was unaware of any reports of similar adverse reactions in goats but an Elanco representative indicated that the use of Tilmicosin in goats in foreign countries has been associated with a high rate of drug-related deaths.

Practitioners should be cautious about extra-label use of tilmicosin in goats. They might contemplate its use for treatment of *Pasteurella haemolytica* that had proven nonresponsive to other treatment such as penicillin, oxytetracycline, or ceftiofur, but the owners should be warned in advance about the lack of other options and the risks involved. Practitioners experiencing such drug-related problems should contact the drug's manufacturer and the Food and Drug Administration's (FDA) Adverse Reaction Hotline 301/594-1722 during working hours of Monday to Friday, 7:30-4:30 EST; 301/594-0797 after hours; fax 301/594-1812, so that the incident can be documented. The FRA's ADR information is published annually in the FDA Veterinarian and is also available through the FDA's home page on the World Wide Web at <http://www.cvm/fda/gov> under the Office of Surveillance and Compliance category. The 1994 Adverse Drug Experience report published in the FDA Veterinarian Vol X, No. VI Nov/Dec 1995 cites two reports involving tilmicosin in goats and one in sheep. --Herd Health Memo, University of Kentucky Cooperative Extension Service, 1995-96 #10, April 1996, as reported in Animal Health Beat, Vol. 12, Issue 7, July 1996, University of Nevada - Reno.

IMMUNOLOGY OF DOGS WITH JUVENILE-ONSET GENERALIZED DEMODICOSIS

Demodicosis is a common skin disease in dogs caused by the mite *Demodex canis*. These mites are present in low numbers in normal skin, but can proliferate to cause localized or generalized skin lesions. These lesions are frequently accompanied by a secondary pyoderma. Generalized demodectic mange (GDM) occurs in both juvenile and adult dogs and can be difficult to cure. The reason for mite proliferation is poorly understood but is thought to involve an immune dysfunction, particularly involving cell mediated immunity. In adult dogs, this dysfunction has been attributed to underlying disease or immunosuppressive drug therapy. In juvenile dogs, however, an inherited, immunological disorder is suspect. Lymphocytes from juvenile dogs with generalized demodicosis have been shown to have a reduced blastogenic response when stimulated with mitogens. However, whether a concurrent pyoderma influences these results is controversial. In addition to blastogenesis assays, CD4:CD8 ratios have been used, in humans and cats, as an index for immune function. (CD 4 = helper T lymphocytes; CD8 = cytolytic T Lymphocytes) Lymphocyte CD4:CD8 ratios have not previously been evaluated in dogs with GDM.

The purpose of this study was to determine if dogs with juvenile-onset GDM have abnormal lymphocyte blastogenesis (LB) and CD4:CD8 ratios that are affected by concurrent pyoderma, and if these parameters differ with the clinical severity of GDM or change as the disease is treated. Dogs were studied before, during, and after treatment for demodicosis. Peripheral blood Lymphocyte blastogenic response to concanavalin A (Con A) and CD4:CD8 ratios were evaluated in dogs with juvenile-onset GDM. Dogs were studied before and after antibiotic treatment for concurrent pyoderma. Five of these dogs were then studied during treatment for *Demodex canis* mites. Lymphoblastogenesis was suppressed in all GDM dogs with concurrent pyoderma. Lymphocyte response improved with antibiotics alone and with anti-mite treatments but never approached that of the control (normal dogs) in response to Con A, even with eradication of mites. CD4:CD8 ratios were significantly higher in GDM dogs than controls before treatment (4.39 ± 1.3 vs. 2.26 ± 0.33 , $P < 0.05$), and became normal in all GDM dogs over time.

It was concluded that Lymphocyte response is suppressed by GDM and concurrent pyoderma. However, an underlying immunologic defect remains in dogs with juvenile-onset GDM after elimination of mites and pyoderma. CD4+ or CD8+ Lymphocyte subsets may play a role in the initiation or establishment of GDM as CD4:CD8 ratios are significantly elevated before treatment. -- Abstracted from: Burkett, G., et al., *Vet. Allergy & Clin. Immun.* 4:46-52, 1996, as reported in *Vet. Med.*, Vol. 2, Issue 5, Sept. 1996, Iowa State University, Ames, IA.

PRODUCTS CONTAINING AMITRAZ NOT FOR USE ON HORSES

One chemical that is highly effective against ticks, mites, and lice on cattle and hogs can be deadly to horses. That chemical is Amitraz. While it is a safe product for cattle and hogs, it causes severe problems, even death, in horses. Products that contain Amitraz are appropriately labeled: "Do not use on horses - can cause death." University of Kentucky researchers noted that 16 horses became sick from topical application of Amitraz. Clinical signs generally appear within 24 hours of use and are associated with the central nervous system and the gastrointestinal systems. The horses had abdominal pain and colic-like symptoms such as decreased gut sounds and impactions. They also became depressed, laid down, and pawed at the ground. Aggressive treatment for four or more days may be required to remedy this toxic problem. It is advisable to use pyrethrin/pyrethroid-containing products for tick control on horses. Ticks can also be physically removed. Horses should be kept out of wooded areas where ticks are more likely to be. Ticks usually attack in or under the horse's mane and tail, in the ears, in the flanks, or around the udder or sheath. It is wise to wear plastic gloves when removing ticks. Place the ticks in a container of alcohol, formaldehyde, or a household bleach such as Clorox. Don't mash them, and thoroughly wash your hands after removing ticks. Horse owners should be cautioned to not borrow products for tick control while at horse shows or trail rides without knowing what is in them, and to check the label before applying any product to horses for tick control. --Dr. Frederick Harper, Ralph Hall, Extension Horse Specialist, University of Tennessee, Knoxville, TN, *Journal of Equine Veterinary Science*, 1996, as reported in *Animal Health Spectrum*, Extension Veterinary Medicine, Volume 7, No. 3, September 1996.

NEW FACULTY AND HOUSE OFFICERS IN THE VETERINARY TEACHING HOSPITAL

July 1st is the annual transition date when clinical residents and interns completing their Master of Science/ residency programs or rotating internship program depart and house officers beginning a 3- or 4-year residency or 1-year rotating internship come on board. New departmental faculty arrivals also frequently begin their employment at Virginia Tech over the summer.

Virginia Buechner-Maxwell, DVM, MS, ACVIM, a member of our faculty as a clinical instructor since 1995, accepted a faculty position in Equine Field Services and Large Animal Clinical Services-Internal Medicine. Rick Howard, DVM, MS, PhD, ACVS, joins the Department of Large Animal Clinical Sciences from Colorado State University as a surgeon. Dr. Nikola Parker, who completed her theriogenology residency with us in June, 1996, will remain as a faculty theriogenologist, beginning in September. Korinn Saker, DVM, PhD, a Research Associate in the department since 1995, began a clinical instructorship in Clinical Nutrition. Dr. Kimberly May, (DVM, VMRCVM '94; Internship, Peterson, Smith, Matthews, Hahn & Slone Equine Hospital, Ocala, FL) has begun her 3-year surgery residency. Dr. Wynne DiGrassie, a 1996 graduate of VMRCVM, began a 3-year residency in theriogenology.

In the Department of Small Animal Clinical Sciences, Rick Broadstone, DVM, PhD, ACVA, joined our faculty from the University of Wisconsin as an anesthesiologist. Dr. Charlotte Davies, who completed her medicine residency at VMRCVM this year and her board certification in ACVIM, will remain as a clinical instructor. Drs. Sean Gallivan (DVM, UC-Davis; internship, Kansas State University) and Eric Wright (DVM, Colorado State University; internship, Southwest Veterinary Specialty Center, Tucson, AZ) began their 3-year surgery residencies. Dr. Michele Allyn (DVM, University of Tennessee; internship, VMRCVM) remains with us in a 3-year medicine residency. Dr. Alain Giroux (DVM, University of Montreal; internship, Metropolitan Veterinary Hospital, Akron, Ohio) began a 4-year radiology residency. And Drs. Joanna Chao (DVM, Texas A&M), Erin Kaz (DVM, North Carolina State University), and Jarrod Lazarus (DVM, University of Florida) began 1-year rotating internship programs. Dennis Olsen, DVM, MS, ACVS comes to us from the University of Georgia as a clinical instructor in surgery, beginning September 16th, and Rosanna Marsella, DVM, ACVD, will join us as a dermatologist from the University of Florida, on October 1st.

The Department of Biomedical Sciences and Pathobiology began its first year of a pathology residency/MS/PhD program and Drs. Don and Renee Prater (DVM, VMRCVM '96) are our first two residents. Dr. Jeff Wolfe also joined the department as a 3rd-year resident/PhD graduate student, having completed the 2-year pathology residency at the University of Florida. Robert Duncan, DVM, ACVP, arrived in June as a faculty pathologist, coming from the State Diagnostic Laboratory in Wytheville, VA. And Shelley Newman, DVM, DVSc, a pathologist from Ontario Veterinary College, joins us as a clinical instructor in anatomic pathology, beginning October 1st. --**Robert A. Martin, DVM, Diplomate ACVS, VTH Director, VMRCVM, Blacksburg, VA.**

TOXICOLOGY LABORATORY UPDATE

Some of you may have noticed that Toxicology was not listed as one of the Lab Services of the VMTH in the last edition of Virginia Veterinary Notes. Let me assure you that the toxicology laboratory and its personnel are still available to serve you at the VMRCVM. Although we have been reorganized under Dr. Lee, who is in charge of the research laboratories; we will still continue to be a reference lab for clinical toxicology samples sent through the Central Receiving Laboratory of VMTH. As always, a toxicologist is available to help you with telephone consultations. By calling the main switchboard of the College ((540) 231-7666), you will be connected with the person handling the toxicology cases. We are currently offering all of our previous tests and hope to be adding new tests in the near future (e.g. pesticide screens, anticoagulant screens, tremorogenic mycotoxins). We have enjoyed serving you in the past and look forward to working with you more in the future. --**Dennis J. Blodgett, DVM, PhD, Coordinator of Toxicology Laboratory, Virginia-Maryland Regional College of Veterinary Medicine, Virginia Tech, Blacksburg, VA.**

**CONTINUING EDUCATION OPPORTUNITIES
FALL 1996**

Date	Topic	Location	Contact Hours
October 4-5	Diagnostic Ultrasound	Blacksburg	10
October 18-19	Orthopedic Surgery - Pelvis, Hip, Femur	Blacksburg	10
November 1-2	Practical Eye Surgery	Blacksburg	10
November 15-16	GI Endoscopy (Intermediate)	Blacksburg	10
November 23	"Last Chance" CE	Blacksburg	8
December 6-7	Small Animal Dentistry	Blacksburg	10
December 13-14	GI & Urological Surgery	Blacksburg	10

Please note: The courses listed above are limited enrollment and feature a hands-on laboratory experience. Program brochures will provide course details. For registration or more information, please contact:

Dr. J.M. Bowen
VMRCVM - Virginia Tech
Blacksburg, VA 24061
(540) 231-7388

Ms. Kerry Bryant
Donaldson Brown Center
Virginia Tech
(540) 231-5182

CONTINUING EDUCATION SERIES

The College of Veterinary Medicine in Blacksburg offers a variety of in-depth, hands-on continuing education programs under the direct supervision of faculty specialists. Series enrollments are limited to ensure one-on-one instruction during the six monthly sessions.

*Recent programs included the following practitioners:

Head & Neck Surgery/Dentistry Series '96

David Barley, Williamsburg, VA
Mark Dallman, Blacksburg, VA
David Love, Westlake, OH
Ira Luskin, Baltimore, MD
Greg Wood, Charlotte, NC

Orthopedic Surgery Series '96

Brian Cather, Manassas, VA
Lori Heintzelman, Lebanon, VA
Thomas Isaac, Charleston, WV
John Isaacs, Greensboro, NC
Stewart Roberts, Concord, NC
Gary Schrader, Arlington, VA
David Cotton, Greensboro, NC
Stephen Stang, Purcellville, VA

Equine Problem Solving Series '96

David Ackerman, Andrews, NC
Tim Barker, Eden, NC
Michael Brown, Elizabethton, TN
Bruce Burkett, Chatham, VA
Michael Erskine, Damascus, MD
Paul Rowan, Virginia Beach, VA
Claudia True, Ashland, VA

THOUGHT FOR THE MONTH

Patience: Patience is the ability to idle your motor when you feel like stripping your gears.

Virginia-Maryland Regional College of Veterinary Medicine Extension Staff:

- Dr. J.M. Bowen - Extension Specialist - Equine
- Dr. C.T. Larsen - Extension Specialist - Avians
- Dr. W. Dee Whittier - Extension Specialist - Cattle

K.C. Roberts, Editor

Maura M. Wood, Production Manager of VIRGINIA VETERINARY NOTES

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