

Interpretive Summaries

SMALL ANIMALS

Comparison of arthroscopic and radiographic abnormalities in the hip joints of juvenile dogs with hip dysplasia

Radiographic findings for 52 dogs (70 hip joints) with clinical signs of hip dysplasia that were scheduled to undergo triple pelvic osteotomy were compared with results of hip joint arthroscopy. Arthroscopic abnormalities were graded from 0 (normal) to 5 (exposed, eburnated subchondral bone).

No radiographic abnormalities were seen in 30 of the 70 (43%) hip joints. Severe, full-thickness articular cartilage lesions (grade 4) of the femoral head or acetabulum were seen arthroscopically in 14 (20%) joints. Lesions \geq grade 2 were seen in 60 (86%) joints. Partial tearing of the ligament of the femoral head was present in 57 (81%) joints, and complete rupture was seen in 5 (7%). Radiographic abnormalities were seen in 13 of the 14 (93%; 95% confidence interval, 66% to 99.8%) joints with grade 4 arthroscopic abnormalities but in only 23 of the 46 (50%; 95% confidence interval, 35% to 65%) joints with grade 2 or 3 arthroscopic abnormalities. Results suggest that radiography is not a sensitive method for identifying moderate cartilage lesions in juvenile dogs with hip dysplasia. If moderate cartilage lesions are an important prognostic indicator for the success of triple pelvic osteotomy, then methods other than radiography need to be used to detect these lesions.—I. G. Holsworth et al (*J Am Vet Med Assoc* 2005; 227:1091–1094).

Evaluation of serum 17-hydroxyprogesterone concentration after administration of ACTH in dogs with hyperadrenocorticism

It has been suggested that some dogs with clinical signs, physical examination findings, and clinicopathologic abnormalities consistent with the diagnosis of hyperadrenocorticism have results of ACTH stimulation tests, low-dose dexamethasone suppression tests, and urine cortisol-to-creatinine ratio assessments that are within reference intervals. Some of these dogs may have an atypical form of hyperadrenocorticism resulting from 1 or several derangements in the biosynthetic pathway for production of cortisol; 17-hydroxyprogesterone (17-OHP) is one of the intermediary steroids produced during the conversion of cholesterol to cortisol. A study was undertaken to evaluate the usefulness of measuring serum 17-OHP concentration after ACTH administration in the diagnosis of hyperadrenocorticism in dogs. Serum

17-OHP concentrations were measured before and after ACTH stimulation in 53 healthy dogs to establish reference values for this study. Dogs with hyperadrenocorticism were assigned to 1 of 3 groups: dogs with pituitary-dependent, adrenal tumor-associated, or atypical hyperadrenocorticism. For serum 17-OHP concentrations after ACTH stimulation in dogs with hyperadrenocorticism, frequency interval and borderline and abnormal serum 17-OHP concentrations were determined.

Results suggested that measurement of serum 17-OHP concentration after ACTH stimulation should be used only when other test results are equivocal.—N. Benitah et al (*J Am Vet Med Assoc* 2005;227:1095–1101).

Adverse events diagnosed within three days of vaccine administration in dogs

The electronic medical records of 360 Banfield veterinary hospitals were searched for vaccine-associated adverse events (VAAEs) diagnosed within 3 days of vaccine administration in dogs. Between January 1, 2002 and December 31, 2003 there were 4,678 (0.38%) VAAEs diagnosed in 1,225,159 dogs vaccinated. The rate of VAAEs/10,000 dogs at risk significantly decreased as body weight increased. Dogs that weighed > 10 to 45 kg (22 to 99 lb) had approximately half the risk of a VAAE, compared with dogs that weighed ≤ 10 kg. Dachshund, Pug, Boston Terrier, Miniature Pinscher, and Chihuahua breeds had the highest rates of VAAEs. Compared with dogs 2 to 9 months of age, VAAE rates were significantly increased at 1 year of age and were greatest in dogs approximately 2 years old. Adverse event risk was also significantly increased in neutered dogs, compared with sexually intact dogs. The VAAE rate significantly increased with each additional vaccine administered during the same office visit.—G. E. Moore et al (*J Am Vet Med Assoc* 2005; 227:1102–1108).

Prevalence of cranial cruciate ligament rupture in a population of dogs with lameness previously attributed to hip dysplasia: 369 cases (1994–2003)

The finding of radiographic changes associated with canine hip dysplasia (CHD) often leads practitioners to diagnose hip dysplasia in dogs that are examined because of hind limb lameness. Results of this study indicate that 32% of dogs referred to a veterinary teaching hospital from 1994 to 2003 for assessment of CHD or hip pain had clinical signs of lameness that were attributable to

cranial cruciate ligament rupture (CCLR) and not CHD, although 94% of the dogs with CCLR had radiographic evidence of CHD. On the basis of these results, it is important to exclude other orthopedic diseases involving the stifle joint before making recommendations for surgical treatment of CHD.—M. Y. Powers et al (*J Am Vet Med Assoc* 2005;227:1109–1111).

Gastrointestinal tract perforation in dogs treated with a selective cyclooxygenase-2 inhibitor: 29 cases (2002–2003)

A review of the Novartis Animal Health pharmacovigilance database revealed records for 29 dogs treated with deracoxib in which gastrointestinal tract perforation was subsequently documented. Sixteen of the 29 (55%) dogs had received deracoxib at a dosage higher than that approved by the FDA for the particular indication being treated, with 25 (86%) dogs having received deracoxib at a dosage > 2 mg/kg/d (0.9 mg/lb/d). Seventeen (59%) dogs had received at least 1 other non-steroidal anti-inflammatory drug (NSAID) or a corticosteroid in close temporal association with deracoxib administration (ie, within 24 hours before or following). In all, 26 (90%) dogs had received deracoxib at a higher-than-approved dosage or had received at least 1 other NSAID or corticosteroid in close temporal association with deracoxib administration. Data suggest that in dogs with gastrointestinal tract perforation that had been treated with deracoxib, perforation is most likely attributable to a number of factors. Deracoxib should only be used at approved dosages. Use of corticosteroids and other NSAIDs in close temporal association with deracoxib or any other cyclooxygenase-2-selective NSAID may induce or exacerbate ulceration. Further study of the cyclooxygenase requirements of the gastrointestinal tract in dogs and of the effects of NSAIDs is required.—B. D. X. Lascelles et al (*J Am Vet Med Assoc* 2005;227:1112–1117).

Response rates and survival times for cats with lymphoma treated with the University of Wisconsin-Madison chemotherapy protocol: 38 cases (1996–2003)

Medical records of 38 cats with lymphoma treated with the University of Wisconsin-Madison chemotherapy protocol were reviewed to determine response rates and survival times. Mean \pm SD age of the cats was 10.9 \pm 4.4 years. Overall median survival time was 210 days (interquartile range, 90 to 657 days), and overall duration of first remission was 156 days (interquartile range, 87 to 316 days). Age, sex, anatomic form, and clinical stage were not significantly associated with duration of first remission or survival time. Eighteen of the 38 (47%) cats had complete remission, 14 (37%) had partial remission, and 6 (16%) had no response. Duration of first remission was significantly longer for cats with complete remission (654 days) than for cats with partial remission (114 days). Median survival time for cats with complete remission (654 days) was significantly longer than median survival time for cats

with partial remission (122 days) and for cats with no response (11 days).

Results suggest that a high percentage of cats with lymphoma will respond to treatment with the University of Wisconsin-Madison chemotherapy protocol. Age, sex, anatomic form, and clinical stage were not significantly associated with duration of first response or survival time, but initial response to treatment was.—R. J. Milner et al (*J Am Vet Med Assoc* 2005;227:1118–1122).

EQUINE

Effect of a 24-hour infusion of an isotonic electrolyte replacement fluid on the renal clearance of electrolytes in healthy neonatal foals

A prospective study was undertaken to determine the effects of a 24-hour infusion of an isotonic electrolyte replacement fluid (IERF) on weight, serum and urine electrolyte concentrations, and other clinicopathologic variables in 4 healthy 4-day-old neonatal foals. An IERF was administered to each foal at an estimated rate of 80 mL/kg/d (36.4 mL/lb/d) for 24 hours. Body weight was measured before and after the infusion period. Urine was collected via catheter during 4-hour periods; blood samples were collected at 4-hour intervals. Variables of interest were recorded at 0, 4, 8, 12, 16, 20, and 24 hours during the infusion period and immediately after the study period, net fluid and whole-body electrolyte changes from baseline values were calculated. Overall, a 24-hour infusion of an IERF containing physiologic concentrations of sodium and potassium resulted in increased renal clearance of sodium, net whole-body potassium loss, and weight loss in neonatal foals. The latter 2 findings suggest that an IERF may not be an appropriate choice for maintenance fluid therapy in foals. Additional studies are required to determine the optimal sodium and potassium content of replacement and maintenance fluids that are administered to neonatal foals.—B. R. Buchanan et al (*J Am Vet Med Assoc* 2005;227:1123–1129).

Surgical correction of ear curling caused by scar tissue formation in a horse

An 18-month-old Belgian Warmblood mare was evaluated because it had injured the outer convex aspect of the left auricle. Second intention healing of the wound area caused tissue contracture, which resulted in the tip of the ear curling backward. By use of a technique involving undermining of the skin and a flap of granulation tissue on the medial aspect of the wound area and multiple incisions of the auricular cartilage, the curling was relieved and the ear regained a more normal shape. A skin graft was applied to cover the existing wound defect in an attempt to accelerate wound healing; thermoplastic material was contoured to fit the inner concave surface of the ear for immobilization and fixation of the ear in its final shape after surgery. Thirty days after surgery, the graft had healed completely and the ear had a normal conformation. The successful outcome of this treatment suggests that

correction of an ear deformity secondary to scar tissue formation by use of an adapted surgical technique and appropriate materials can be achieved with good cosmetic results in horses.—S. Massoni et al (*J Am Vet Med Assoc* 2005;227:1130–1133).

Evaluation of risk factors for development of catheter-associated jugular thrombophlebitis in horses: 50 cases (1993–1998)

A retrospective case-control study was performed to determine risk factors for development of catheter-associated jugular thrombophlebitis in hospitalized horses. Signalment, history, outcome, clinicopathologic findings, primary illness, and treatment were obtained from the medical records. Fifty horses with a clinical diagnosis of catheter-associated thrombophlebitis of a jugular vein and 100 control horses were chosen. Control horses must have been hospitalized for at least 5 days, have had an IV catheter placed in a jugular vein (other than for solely anesthetic purposes), and have had no evidence of thrombophlebitis during admission or hospitalization. Univariate and multivariate analyses were performed, results were reported as odds ratios, and 95% confidence intervals were calculated. Clinical signs of endotoxemia, salmonellosis, hypoproteinemia, and large intestinal disease; admission to the medicine section; and receiving antidiarrheal or antiulcerative medications were identified as risk factors for development of catheter-associated thrombophlebitis of a jugular vein in horses.—B. A. Dolente et al (*J Am Vet Med Assoc* 2005; 227:1134–1141).

RUMINANTS

One-step laparoscopic abomasopexy for correction of left-sided displacement of the abomasum in dairy cows

Four adult dairy cows in which a diagnosis of left-displaced abomasum (LDA) had been made underwent a 1-step laparoscopic abomasopexy (LA). The technique was performed with each cow positioned in dorsal recumbency. Two laparoscopic portals were created in the right paramedian area to identify the abomasum and direct insertion of the steel trocar and cannula into the abomasal lumen. A stainless steel toggle pin (with 2 lengths of suture attached to its midpoint) was inserted via the cannula into the abomasal lumen while the excess suture material remained exterior to the abdomen. The abomasum was deflated, and the excess suture material was withdrawn up to a preset marker on the suture to position the abomasum adjacent to the body wall. The suture was then tied to secure the abomasum in place. By use of this 1-step LA technique, LDA was successfully corrected in all 4 cows. The procedure is minimally invasive and allows viewing of the abomasum for correct positioning and fixation; it can be accomplished with the speed associated with the blind roll-and-tack technique. The 1-step LA technique may reduce the incidence of complications associated with traditional laparotomy and the blind roll-and-tack technique and could be a useful alternative procedure for the treatment of LDA in dairy cows.—K. D. Newman et al (*J Am Vet Med Assoc* 2005;227:1142–1147).



New Veterinary Biologic Products

Product name	Species and indications for use	Route of administration	Remarks
Porphyromonas Denticanis-Gulae-Salivosa Bacterin (Pfizer Animal Health, Kalamazoo, Mich, US Vet Lic No. 189)	As an aid in the prevention of periodontitis caused by <i>Porphyromonas denticanis</i> , <i>P gulae</i> , and <i>P salivosa</i> in healthy dogs	SC	USDA licensed 6/24/05
West Nile Virus Vaccine, DNA (Wyeth Inc, Fort Dodge, Iowa, US Vet Lic No. 112)	For vaccination of healthy adult horses as an aid in the prevention of viremia caused by West Nile virus	IM	USDA licensed 7/13/05
Babesia Caballi Antibody Test Kit, cElisa (VMRD Inc, Pullman, Wash, US Vet Lic No. 332)	For the detection of <i>B caballi</i> antibodies in horses	NA	USDA licensed 8/16/05
Babesia Equi Antibody Test Kit, cElisa (VMRD Inc, Pullman, Wash, US Vet Lic No. 332)	For the detection of <i>B equi</i> antibodies in horses	NA	USDA licensed 8/16/05