

Interpretive Summaries

SMALL ANIMALS

Control of urine marking by use of long-term treatment with fluoxetine or clomipramine in cats

This study examined the relative efficacy of 2 antianxiety medications commonly used to reduce urine marking (spraying) in cats during treatment periods ranging from 8 to 32 weeks. No differences were evident between effects of fluoxetine hydrochloride (1 mg/kg [0.45 mg/lb], PO, q 24 h) and clomipramine hydrochloride (0.5 mg/kg [0.23 mg/lb], PO, q 24 h) during 8 and 16 weeks of treatment. Results revealed increasing efficacy with fluoxetine treatment extending to 32 weeks. Return of marking after abrupt termination of fluoxetine treatment occurred in most cats, whether treated for 16 or 32 weeks. Cats that were successfully treated with fluoxetine, but resumed marking after drug withdrawal, were successfully treated again by use of the same drug regimen.—B. L. Hart et al (*J Am Vet Med Assoc* 2005;226:378–382).

Prevalence and radiologic and histologic appearance of vesicourachal diverticula in dogs without clinical signs of urinary tract disease

Fifty dogs without any history or clinical signs of urinary tract disease that had been euthanatized for unrelated reasons were examined to determine the prevalence and radiologic and histologic appearance of vesicourachal diverticula. Retrograde positive-contrast radiography was performed, and necropsy specimens from the urinary bladder vertex were examined by means of light microscopy for diverticula and signs of inflammation.

Seventeen of the 50 (34%) dogs had vesicourachal diverticula, and 1 additional dog had a urachal cyst. Fifteen of the 17 diverticula were macroscopic; surface area of the diverticulum could be measured radiographically in 13 of these dogs and ranged from 1 to 90 mm². The remaining 2 diverticula were microscopic. Sixteen diverticula were intramural and 1 was extramural. Light microscopic signs of bladder wall inflammation could be detected in 5 dogs, 4 of which had macroscopic diverticula. Although persistent vesicourachal diverticula have been reported to be a risk factor for urinary tract infection in dogs, results suggest that most vesicourachal diverticula in dogs without signs of urinary tract disorders are not associated with inflammatory disorders. Further studies of the biological behavior of vesicourachal diverticula in dogs with and without signs of lower urinary tract disease

are needed to clarify whether these diverticula are a predisposing cause of urinary tract infection, a consequence of urinary tract infections, unrelated to urinary infections, or some combination of these.—K. Groesslinger et al (*J Am Vet Med Assoc* 2005;226:383–386).

Estimates of prevalence of hip dysplasia in Golden Retrievers and Rottweilers and the influence of bias on published prevalence figures

The prevalences of canine hip dysplasia (CHD) in 200 Golden Retrievers and 140 Rottweilers randomly selected from the PennHIP database were 2 to 3 times higher than published figures from the Orthopedic Foundation for Animals (OFA). Prevalence of CHD ranged from 53% to 73% in Golden Retrievers and from 41% to 69% in Rottweilers. The higher values in each range were obtained by use of the caudolateral curvilinear osteophyte considered as a pathognomonic sign of osteoarthritis and thus diagnostic for CHD. In a separate group of 93 dogs referred for OFA radiographs, 49 (53%) of the hip radiographs were submitted to the OFA, and of those, 45 (92%) received passing OFA scores. Of the 44 radiographs that were not submitted, only 50% had passing scores when examined retrospectively. Hip radiographs without abnormal findings were 8.2 times as likely to be submitted to the OFA. Rottweiler hip radiographs were significantly more likely to be submitted than those of Golden Retrievers. There is substantial prescreening and breed-specific bias in OFA prevalence values, which confounds accurate determination of reduction in the prevalence of CHD.—E. R. Paster et al (*J Am Vet Med Assoc* 2005;226:387–392).

Evaluation of the association between initial proteinuria and morbidity rate and death in dogs with naturally occurring chronic renal failure

Forty-five dogs with chronic renal failure were enrolled in a prospective, cohort study to determine whether an increased urine protein-creatinine ratio (UP:C) were associated with a greater risk of developing a uremic crisis, risk of dying, or rate of decline in renal function. Dogs were initially assigned to 2 groups on the basis of initial UP:C determinations (UP:C < 1.0 and UP:C ≥ 1.0); Kaplan-Meier and Cox proportional hazard model analyses were used to estimate the association between UP:C and the risk of developing a uremic crisis and dying. To investigate whether a graded association between the magnitude of proteinuria and

the risk of the aforementioned outcomes existed, the population of dogs with a UP:C \geq 1.0 was further divided into 3 subgroups. Serial evaluations of reciprocal of serum creatinine concentration were used to estimate the decline in renal function.

Dogs with UP:C \geq 1.0 were at an increased risk of developing a uremic crisis or of dying, compared with dogs with UP:C $<$ 1.0. In addition, as the magnitude of proteinuria increased among subgroups, the risk of uremic crisis and death increased. A greater rate of renal failure progression was observed in dogs with UP:C \geq 1.0, compared with dogs with UP:C $<$ 1.0. Results suggest that an initial high UP:C in dogs with naturally occurring renal failure was associated with risk of uremic crises and death. Additional studies in dogs with naturally occurring renal failure are required to determine whether a cause-and-effect relationship exists between a high UP:C and progressive renal injury.—E. Jacob et al (*J Am Vet Med Assoc* 2005;226:393–400).

Use of arthroscopy for debridement of the elbow joint in cats

Arthroscopy was used to identify and remove loose osteochondral fragments detected in the region of the medial coronoid processes in the elbow joints of a cat that was lame in both forelimbs. The cat had clinical signs and arthroscopic lesions similar to those seen in dogs with fragmented medial coronoid processes. Moderate osteoarthritis was observed radiographically. Lameness resolved 2 weeks after removal of the fragments and was not detected for 2 years after surgery. No obvious progression of the osteoarthritis in the elbow joints was detected radiographically 2 years after surgery.—B. A. Staiger and B. S. Beale (*J Am Vet Med Assoc* 2005;226:401–403).

EQUINE

Farm characteristics and management practices associated with development of *Rhodococcus equi* pneumonia in foals

Members of the American Association of Equine Practitioners residing in the United States were recruited to participate in a study to identify farm characteristics and management practices associated with *Rhodococcus equi* pneumonia in foals. Information from 5,230 foals on 138 breeding farms was obtained. Results indicated that breeding farms of large size that housed large numbers of mares and foals had greater odds of being affected by *R equi* pneumonia. No alterable management practices determined as undesirable were associated with increased odds of *R equi* pneumonia. A number of desirable health management practices commonly used on horse farms were not effective for controlling or preventing *R equi* pneumonia, indicating that host factors influencing susceptibility may be important for understanding the epidemiology of this disease. Foal pneumonia caused by *R equi* appears to be a disease associated with intensive management.—N. D. Cohen et al (*J Am Vet Med Assoc* 2005;226:404–413).

Evaluation of the analgesic effects of phenylbutazone administered at a high or low dosage in horses with chronic lameness

To evaluate the analgesic effects of phenylbutazone, 9 horses with chronic forelimb lameness were treated with phenylbutazone (4.4 mg/kg/d [2 mg/lb/d] or 8.8 mg/kg/d [4 mg/lb/d]) or saline solution, IV, once daily for 4 days. All horses received all 3 treatments with a minimum of 14 days between treatments. Mean peak vertical force (mPVF) was measured and clinical lameness scores were assigned before initiation of each treatment and 6, 12, and 24 hours after the final dose for each treatment.

Compared with values obtained after administration of saline solution, mPVF was significantly increased at all posttreatment evaluation times when phenylbutazone was administered. Clinical lameness scores were significantly decreased 6 and 12 hours after administration of the final dose when phenylbutazone was administered at the low or high dosage but were significantly decreased 24 hours after treatment only when phenylbutazone was administered at the high dosage. No significant differences in mPVF and clinical lameness scores were found at any time when phenylbutazone was administered at the low versus high dosage. Results suggest that the high dosage of phenylbutazone was not associated with greater analgesic effects than was the low dosage. Considering that toxicity of phenylbutazone is related to dosage, the higher dosage may not be beneficial in chronically lame horses.—H. H. Hu et al (*J Am Vet Med Assoc* 2005;226:414–417).

Heel bulb lacerations in horses: 101 cases (1988–1994)

Medical records of 101 horses that sustained lacerations of the heel bulb or proximal phalangeal region (pastern) were reviewed. Clinical history, structures involved, treatment, and outcome were recorded. The most common cause of injury was contact with wire or a metallic object. Mean \pm SD time from injury to referral was 24 \pm 45 hours. Seventeen lacerations involved synovial structures, and the distal interphalangeal joint was most commonly affected. Treatment consisted of wound debridement, lavage of affected synovial structures, and application of a foot bandage or cast. Fifty-six horses were treated with systemically administered antimicrobial drugs. Follow-up information was obtained for 61 horses; 51 horses returned to their intended use, and 10 had a persistent lameness or were unable to be used as intended. Horses with involvement of synovial structures had a poorer prognosis than horses that did not have involvement of synovial structures.—J. C. Janicek et al (*J Am Vet Med Assoc* 2005;226:418–423).

RUMINANTS

Evaluation of enzyme-linked immunosorbent assays performed on milk and serum samples for detection of paratuberculosis in lactating dairy cows

A study was performed to determine whether results obtained for milk and serum samples with

ELISAs intended for diagnosis of paratuberculosis in dairy cows were comparable to results obtained by means of mycobacterial culture of fecal samples. Milk, serum, and fecal samples were obtained from 689 lactating dairy cows in 9 Ontario herds. Fecal samples were submitted for mycobacterial culture. Serum samples were tested with a commercially available ELISA for antibodies against *Mycobacterium paratuberculosis*, and preserved milk samples were tested with an indirect ELISA for antibodies against *M paratuberculosis*.

Results were positive for 130 of the 689 (18.9%) serum samples, 77 of the 689 (11.1%) milk samples, and 72 of the 689 (10.4%) fecal samples. The level of agreement between results for milk and serum samples was only moderate. Proportions of positive results for serum and fecal samples were significantly different, but proportions of positive results for milk and fecal samples were not significantly different. In addition, results for milk samples had a higher level of agreement with results of mycobacterial culture than did results for serum samples. Results suggest that the indirect ELISA used on milk samples may be a convenient method of detecting paratuberculosis in dairy herds.—

S. H. Hendrick et al (*J Am Vet Med Assoc* 2005;226:424–428).

Effects of positive results for *Mycobacterium avium* subsp *paratuberculosis* as determined by microbial culture of feces or antibody ELISA on results of caudal fold tuberculin test and interferon- γ assay for tuberculosis in cattle

Cross-reactivity between different mycobacterial antigens has led to the suggestion that infection with *Mycobacterium avium* subsp *paratuberculosis* may result in false-positive responses on the caudal fold tuberculin (CFT) test for tuberculosis in cattle. A study involving 1,043 cattle was performed to determine whether cattle testing positive for *M paratuberculosis* as determined by microbial culture of feces or antibody ELISA were more likely to have false-positive responses on the CFT test or interferon- γ assay for *Mycobacterium bovis* than cattle testing negative for *M paratuberculosis*. Feces and blood samples for plasma were collected from cattle \geq 24 months old on the day the CFT test was read.—J. R. Dunn et al (*J Am Vet Med Assoc* 2005;226:429–435).