

Interpretive Summaries

SMALL ANIMALS

Evaluation of the effects of premedication on gastroduodenoscopy in cats

The choice of premedicant may influence the ease with which gastroduodenoscopy is performed. In a crossover study, 8 cats were premedicated with hydromorphone, hydromorphone and glycopyrrolate, medetomidine, and butorphanol. Degree of sedation was evaluated subjectively. General anesthesia was induced with ketamine and maintained with isoflurane. The times required to pass an endoscope through the cardiac and pyloric sphincters were recorded; difficulty of endoscope passage was scored subjectively. No significant differences in the difficulty or time required to pass the endoscope into the stomach or duodenum were found among the premedicant groups. Premedication with medetomidine resulted in the greatest degree of sedation and longest time to return to sternal recumbency. Results suggest that hydromorphone, hydromorphone and glycopyrrolate, medetomidine, and butorphanol at the doses tested can be used to premedicate cats prior to general anesthesia for gastroduodenoscopy.—A. A. Smith (*J Am Vet Med Assoc* 2004;225:540–544).

Naturally occurring tularemia in a dog

A 4-year-old spayed female Irish Setter was examined because of acute onset of lethargy, anorexia, and weakness. The dog had eaten an adult rabbit 36 hours earlier. Tularemia was suspected because of the rabbit exposure; however, other common diseases characterized by fever, malaise, and lymphadenopathy of acute onset were also considered (ie, ehrlichiosis and Rocky Mountain spotted fever). The dog was treated with doxycycline (5 mg/kg [2.3 mg/lb], PO, q 24 h) for 14 days as well as supportive treatment with a balanced electrolyte solution (lactated Ringer's solution [200 mL, SC]). The diagnosis was first established by results of bacteriologic cultures of fine-needle aspirates obtained from lymph nodes and confirmed by results of ELISA and a polymerase chain reaction assay. Successful and timely ante-mortem diagnosis of tularemia in dogs can be accomplished through lymph node aspiration and bacteriologic culture.—K. R. Meinkoth et al (*J Am Vet Med Assoc* 2004;225:545–547).

Evaluation of outcome of otitis media after lavage of the tympanic bulla and long-term antimicrobial drug treatment in dogs: 44 cases (1998–2002)

Otitis media is a common sequela to severe or chronic otitis externa in dogs. Treatment of chronic

infectious otitis media is challenging because long-term intensive medical management is essential for success. We hypothesized that video-otoscopic lavage of the tympanic bulla followed by long-term antimicrobial drug treatment would be effective. Retrospective analysis of 44 cases of otitis media managed by an academic referral dermatology practice revealed that otitis media in 36 dogs resolved after lavage of the tympanic bulla and medical management; mean time to resolution was 117 days (range, 30 to 360 days), despite a history of chronic otitis that persisted for a mean of 24.9 months (range, 3 to 84 months). Three dogs were lost to follow-up, and 4 dogs eventually required surgical intervention.—B. S. Palmeiro et al (*J Am Vet Med Assoc* 2004;225:548–553).

EQUINE

Use of the meridian test for the detection of equine herpesvirus type 1 infection in horses with decreased performance

The meridian test, a component of acupuncture, was evaluated for the detection of recent or recently reactivated equine herpesvirus type I (EHV-1) infection in horses with decreased performance. Recent or recently reactivated infection was defined as infection that had developed within 1 month of the beginning of the study. Results were compared with those obtained through a combination of physical and neurologic examinations and laboratory diagnostic methods. Complement fixation tests for detection of antibodies against EHV-1 and equine herpesvirus type 4 (EHV-4) and virus neutralization tests for detection of antibodies against EHV-1 were performed on paired serum samples obtained 3 weeks apart. There was a significant difference in skin sensitivity in the cervical, sacral, and gluteal regions and flank between case and control horses. By use of the meridian test, case horses were sensitive to manipulation of all acupuncture points believed to be associated with EHV infections, whereas only a few control horses were sensitive to manipulation of 6 of 15 of those points. Results of the meridian test in case horses were associated with sensitivity reactions similar to those detected by physical and neurologic examinations; however, an unequivocal association with EHV-1 or EHV-4 infection was not detected.—S. Chvala et al (*J Am Vet Med Assoc* 2004;225:554–559).

Effects of intravenous administration of dimethyl sulfoxide on cardiopulmonary and clinicopathologic variables in awake or halothane-anesthetized horses

Dimethyl sulfoxide (DMSO) is frequently administered perioperatively to horses with acute, severe gas-

gastrointestinal tract diseases in an attempt to scavenge free hydroxyl radicals produced during reperfusion injury. A prospective study was performed to evaluate the cardiopulmonary and clinicopathologic effects of IV infusion of 5 L of a balanced electrolyte solution with and without 1 g/kg (0.45 g/lb) of 10% DMSO solution in 6 healthy horses when awake and anesthetized with halothane (4 treatments/horse). Various cardiopulmonary and clinicopathologic variables were monitored before and at intervals during and after fluid administration. Intravenous administration of DMSO did not induce significant changes in cardiopulmonary function or clinicopathologic variables in either awake or halothane-anesthetized healthy horses. Additional studies are required to evaluate the potentially beneficial effects of administration of DMSO to horses with compromised systemic functions, such as severe gastrointestinal tract disorders with subsequent endotoxemia during anesthesia, and assess whether such treatment may improve the survival rate of those animals.—H-C. Lin et al (*J Am Vet Med Assoc* 2004;225:560–566).

RUMINANTS/CAMELIDS

Prevalence of *Salmonella* spp on conventional and organic dairy farms

The purpose of the study was to describe prevalence of *Salmonella* spp on dairy farms in the Midwest and Northeast United States over time. Five visits to 110 organic and conventional farms in Minnesota, Wisconsin, Michigan, and New York were made at 2-month intervals. Fecal samples from healthy cows, calves, and other targeted cattle groups and samples from bulk tank milk, milk line filters, water, feed sources, and pen floors were collected at each visit. *Salmonella* spp were detected in 4.8% of fecal samples and 5.9% of environmental samples. At least 1 *Salmonella*-positive sample was found on 92.7% of farms. Farms in the upper quartile for median within-herd prevalence of *Salmonella* spp in cattle accounted for 76.3% of the *Salmonella*-positive samples. There was no significant difference in the prevalence of *Salmonella* spp between conventional and organic farms. More than 1 serogroup was isolated on 76.4% of *Salmonella*-positive farms. Results of this study reveal that almost all dairy farms can be expected to be *Salmonella*-positive over time; however, 25% of farms accounted for > 75% of positive samples. The results suggest that intervention strategies aimed to decrease prevalence of *Salmonella* spp on dairy farms may be more effectively directed

toward farms with a high prevalence of *Salmonella* spp.—C. P. Fossler et al (*J Am Vet Med Assoc* 2004;225:567–573).

Isolation of *Salmonella* spp from the environment of dairies without any history of clinical salmonellosis

To determine whether *Salmonella* spp could be isolated from the environment of free stall dairies, swab samples were collected from the environment of 20 free stall dairies in Wisconsin with no history of clinical salmonellosis and submitted for bacterial culture. Dairy owners completed a questionnaire regarding management and production practices. Odds ratios were calculated to compare herd-level risk factors between dairies from which *Salmonella* organisms were isolated and herds from which *Salmonella* organisms were not isolated.

Salmonella organisms were isolated from 9 of the 20 (45%) dairies, with *Salmonella* serotype Meleagridis isolated from 4 dairies, S Meleagridis and S Kentucky isolated from 2 dairies, S Meleagridis and S Cyprus isolated from 1 dairy, S Cerro isolated from 1 dairy, and S Corvallis isolated from 1 dairy. All isolates were susceptible to all antimicrobial agents tested. None of the potential risk factors analyzed demonstrated a significant association with an increased likelihood of isolating *Salmonella* spp.—S. F. Peek et al (*J Am Vet Med Assoc* 2004;225:574–577).

Hemolysis and Heinz body formation associated with ingestion of red maple leaves in two alpacas

Two adult female alpacas were evaluated for acute onset of weakness, pale mucous membranes, and signs of depression of unknown etiology. Both alpacas had intravascular hemolysis, anemia, and Heinz body formation and had been fed wilted red maple leaves. Clinical signs developed several days after ingestion of the leaves. No other toxin exposure was reported, and no parasites were detected. Dietary copper and nitrate-nitrite concentrations were evaluated and determined to be within reference limits. Both alpacas continued to become profoundly anemic with continued hemolysis. This necessitated blood transfusion as a life-saving intervention; however, prior to whole blood being available, transfusion with bovine hemoglobin glutamer was necessary. Both alpacas recovered without complications.—S. DeWitt et al (*J Am Vet Med Assoc* 2004;225:578–583).