Evaluation of the perioperative analgesic efficacy of buprenorphine, compared with butorphanol, in cats

Leon N. Warne, DVM; Thierry Beths, DVM, PhD; Merete Holm, DVM; Jennifer E. Carter, DVM; Sébastien H. Bauquier, DVM
Faculty of Veterinary Science, University of Melbourne, Werribee, VIC 3030, Australia (Warne, Beths, Carter, Bauquier); Merete Holm Veterinary Consultancy, 19 Henry Lawson Ave, Abbotsford, NSW 2046, Australia (Holm)

Supported by Troy Laboratories (Australia) Pty Ltd.

The authors thank Dr. Donna Scott and Renae Kerr for technical assistance and Garry Anderson for statistical assistance.

Address correspondence to Dr. Bauquier (Bauquier@unimelb.edu.au).

Objective—To compare the analgesic effects of buprenorphine and butorphanol in domestic cats.

Design—2-phase positive-controlled randomized masked clinical trial.

Animals—39 healthy female cats (10 in phase 1 and 29 in phase 2).

Procedures—Cats admitted for ovariohysterectomy received buprenorphine (4 in phase 1; 14 in phase 2) or butorphanol (6 in phase 1; 15 in phase 2). In phase 1, cats were premedicated with buprenorphine (0.02 mg/kg [0.009 mg/lb], IM) or butorphanol (0.4 mg/kg [0.18 mg/lb], IM), in combination with medetomidine. Anesthesia was induced with propofol (IV) and maintained with isoflurane in oxygen. After extubation, medetomidine was antagonized with atipamezole. A validated multidimensional composite scale was used to assess signs of pain after surgery starting 20 minutes after extubation and continuing for up to 360 minutes, and pain score comparisons were made between the 2 groups. Phase 2 proceeded similar to phase 1 with the following addition: during wound closure, cats from the butorphanol and buprenorphine groups received butorphanol (0.4 mg/kg, IM) or buprenorphine (0.02 mg/kg, IM), respectively.

Results—Phase 1 of the study was stopped after 10 cats were ovariohysterectomized because 9 of 10 cats required rescue analgesia at the first evaluation. In phase 2, at the first pain evaluation, pain scores from the buprenorphine group were lower, and all cats from the butorphanol group required rescue analgesia. None of the cats from the buprenorphine group required rescue analgesia at any time.

Conclusions and Clinical Relevance—Buprenorphine (0.02 mg/kg, IM) given before surgery and during wound closure provided adequate analgesia for 6 hours following ovariohysterectomy in cats, whereas butorphanol did not.

Stephanie L. Shaver, DVM; Geraldine B. Hunt, BVSc, MVetClinStud, PhD; Scott W. Kidd, DVM
Department of Surgical and Radiological Sciences, School of Veterinary Medicine, University of California-Davis, Davis, CA 95616. (Shaver, Hunt, Kidd)

Dr. Kidd's present address is Pet Emergency and Specialist Centre, 1103 Dandenong Rd, Malvern East, VIC 3145, Australia.

Address correspondence to Dr. Hunt (gbhunt@ucdavis.edu).

Objective—To evaluate fluid production and factors associated with seroma formation after placement of closed suction drains in clean surgical wounds in dogs.

Design—Retrospective case series.

Animals—77 client-owned dogs with a subcutaneous closed suction drain placed following a clean surgical procedure.

Procedures—Medical records (January 2005 to June 2012) were reviewed, and signalment, site of surgery and underlying disease process, histologic evaluation results, total drain fluid production, fluid production rate (mL/kg/h) at 12-hour intervals, cytologic evaluation of drain fluid, and development of dehiscence, infection, or seroma were recorded. Associations among variables were evaluated.

Results—The most common complication was dehiscence (n = 18), followed by seroma (14) and infection (4). Dogs that developed a seroma had significantly greater total drain fluid volume relative to body weight and greater fluid production rate at 24 and 72 hours as well as the last time point measured before drain removal. Dogs in which drains were removed when fluid production rate was > 0.2 mL/kg/h (0.09 mL/lb/h) were significantly more likely to develop a seroma.

Conclusions and Clinical Relevance—Seroma formation was more common in dogs with a higher rate of fluid production relative to body weight, but was not associated with the number of days that a closed suction drain remained in situ. Dogs may be at greater risk of seroma formation if their drains are removed while drainage is still occurring at a rate > 0.2 mL/kg/h.
Use of ethylene-vinyl alcohol copolymer as a liquid embolic agent to treat a peripheral arteriovenous malformation in a dog

William T. N. Culp, VMD; Craig B. Glaiberman, MD; Rachel E. Pollard, PhD, DVM; Erik R. Wisner, DVM
Departments of Veterinary Surgical and Radiological Sciences, School of Veterinary Medicine, University of California-Davis, Davis, CA 95616 (Culp, Pollard, Wisner); Sutter Imaging, Interventional Radiology, 2801 K St, Ste 502, Sacramento, CA 95816 (Glaiberman)

No funding was received.
The authors thank John Doval for technical assistance.
Address correspondence to Dr. Culp (wculp@ucdavis.edu).

Case Description—An 11-year-old castrated male Tibetan Mastiff was evaluated because of a visibly enlarged blood vessel and progressively worsening swelling of the right hind limb.

Clinical Findings—On physical examination, the right hind limb was markedly larger than the left hind limb and the dog was minimally weight bearing on the affected limb. A bruit was auscultated over the affected region. Ultrasonography of the tarsal region of the right hind limb revealed an artery with turbulent flow that communicated with venous drainage. A CT scan confirmed the presence of an arteriovenous malformation (AVM).

Treatment and Outcome—Embolization of the AVM with a liquid embolic agent (ethylene-vinyl alcohol copolymer dissolved in dimethyl sulfoxide) was elected. An arteriogram was performed prior to treatment and delineated the vessels that were targeted for embolization. The embolic agent was infused into the AVM, and a postinjection arteriogram confirmed complete occlusion of the AVM nidus and normal arterial flow to the paw with subsequent normal venous drainage. The circumference of the abnormal paw was 51 cm before the procedure and 22.9 cm at 4 weeks after the procedure. Additionally, the gait of the dog dramatically improved. No complications associated with the procedure developed.

Clinical Relevance—Peripheral AVMs in dogs are uncommon, and described treatment options are limited and generally associated with serious morbidity. A liquid embolic agent, ethylene-vinyl alcohol copolymer dissolved in dimethyl sulfoxide, was successfully administered in this case, and no morbidity was observed secondary to the procedure. Clinical success was characterized by substantial improvement in limb swelling and marked improvement in the gait of the dog.
Casey Budgeon, DVM; Christoph Mans, Dr med vet; Tamara Chamberlin, DVM; John Stein, DVM; Randi Drees, Dr med vet; Cecilia Robat, Dr med vet; Marie Pinkerton, DVM; Denise M. Imai, DVM, PhD; Jonathan McAnulty, DVM, PhD

Departments of Surgical Sciences, School of Veterinary Medicine, University of Wisconsin, Madison, WI 53706. (Budgeon, Mans, Stein, Drees, McAnulty); Pathobiology, School of Veterinary Medicine, University of Wisconsin, Madison, WI 53706. (Chamberlin, Pinkerton, Imai); Medical Sciences, School of Veterinary Medicine, University of Wisconsin, Madison, WI 53706. (Robat)

Dr. Drees' present address is Department of Clinical Sciences and Services, Royal Veterinary College, North Mymms, Hatfield, Hertfordshire AL9 7TA, England. Dr. Imai's present address is Comparative Pathology Laboratory, School of Veterinary Medicine, University of California-Davis, Davis, CA 95616.

Address correspondence to Dr. Mans (cmans@vetmed.wisc.edu).

Case Description—A 10-year-old spayed female Holland Lop–mix pet rabbit (Oryctolagus cuniculus) was evaluated because of purulent-hemorrhagic discharge from the right ear canal and a suspected mass within that ear canal.

Clinical Findings—Results of contrast-enhanced CT, video otoscopy, and histologic examination of endoscopic tissue biopsy samples indicated severe otitis media and externa and a benign trichoepithelioma of the right ear canal.

Treatment and Outcome—Total ear canal ablation and lateral bulla osteotomy were performed. Histologic examination of a surgical biopsy sample of the mass indicated malignant trichoepithelioma. Tumor recurrence was detected 22 weeks after surgery. The rabbit was euthanized 33 weeks after surgery because of the large size of the recurrent tumor and declining quality of life. Necropsy findings indicated a malignant trichoepithelioma with local and lymphatic invasion into the right mandibular lymph node.

Clinical Relevance—This was the first report of the clinical diagnosis, surgical treatment, and outcome for a domestic rabbit with a diagnosis of a malignant trichoepithelioma of the ear canal and associated otitis media and externa. Neoplasia should be included as a differential diagnosis for pet rabbits with otitis externa and media. Although such tumors are typically benign, trichoepitheliomas in rabbits can be malignant. Computed tomography and histologic examination of tissue samples were useful diagnostic techniques, but histologic examination of an endoscopic biopsy sample did not allow identification of malignant characteristics of the trichoepithelioma.
Objective—To characterize clinical signs, diagnostic test results, foreign body location, treatment, and outcome for dogs and cats with sewing needle foreign bodies.

Design—Retrospective case series.

Animals—65 dogs and cats with sewing needle foreign bodies.

Procedures—Medical records of 27 dogs and 38 cats examined because of sewing needle foreign bodies from January 2000 to February 2012 were reviewed for signalment, medical history, physical examination findings, diagnostic test results, interval from witnessed exposure and radiographic imaging to definitive treatment, definitive treatment, sewing needle location, complications, and outcome.

Results—7 (10.8%) animals had sewing needles in extragastrointestinal locations that were not causing clinical signs. The remaining 58 (89.2%) animals had known sewing needle exposure or acute clinical signs associated with ingestion. The esophageal and gastric regions were the most common location for a sewing needle (10/21 [47.6%] dogs; 19/37 [51.4%] cats), followed by the oropharynx (7/21 [33.3%] dogs; 11/37 [29.7%] cats) and small and large intestines (4/21 [19.0%] dogs; 7/37 [18.9%] cats). Gastrointestinal perforation was detected in 10 of 58 (17.2%) animals (5/21 [23.8%] dogs; 5/37 [13.5%] cats). Sewing needles in the esophagus and stomach were successfully removed endoscopically in 8 of 9 dogs and 18 of 19 cats. Survival rate was 98.1% (51/52) for animals receiving definitive treatment.

Conclusions and Clinical Relevance—Endoscopic removal of ingested sewing needles was highly successful and should be recommended to prevent gastrointestinal tract perforation and associated morbidity. Prognosis for dogs and cats receiving definitive treatment for sewing needle foreign body ingestion was excellent.
**Efficacy of systemic adjuvant therapies administered to dogs after excision of oral malignant melanomas: 151 cases (2001–2012)**

Sarah E. Boston, DVM, DVSc; Xiaomin Lu, MA, PhD; William T. N. Culp, VMD; Vincenzo Montinaro, DVM; Giorgio Romanelli, DVM; Robert M. Dudley, DVM, MS; Julius M. Liptak, DVM, MS; Lisa A. Mestrinho, DVM, MSc; Paolo Buracco, DVM

Department of Small Animal Clinical Sciences, College of Veterinary Medicine, University of Florida, Gainesville, FL 32608. (Boston); Department of Biostatistics and Children's Oncology Group, College of Public Health and Health Professions and Medicine, University of Florida, Gainesville, FL 32608. (Lu); Department of Veterinary Surgical and Radiological Sciences, School of Veterinary Medicine, University of California-Davis, Davis, CA 95616. (Culp); Clinica Veterinaria Nerviano, Via Giulio Cesare Lampugnani, Nerviano, MI 320014, Italy. (Montinaro, Romanelli); MedVet Columbus, Medical and Cancer Centers for Pets, 300 E Wilson Bridge Rd, Worthington, OH 43085. (Dudley); Alta Vista Animal Hospital, 2616 Bank St, Ottawa, ON K1T 1M9, Canada. (Liptak); Center for Research in Veterinary Sciences, Faculty of Veterinary Medicine, Lusofona University, Lisbon, Portugal. (Mestrinho); Dipartimento di Scienze Veterinarie, University of Turin, Torino, 10095, Italy. (Buracco)

Supported by the Veterinary Society of Surgical Oncology Research Committee.

Address correspondence to Dr. Boston (sboston@ufl.edu).

**Objective**—To determine prognostic factors for and compare outcome among dogs with oral malignant melanoma following excision with or without various systemic adjuvant therapies.

**Design**—Retrospective case series.

**Animals**—151 dogs with naturally occurring oral malignant melanomas treated by excision with or without adjuvant therapies from 2001 to 2012.

**Procedures**—Case accrual was solicited from Veterinary Society of Surgical Oncology members via an email list service. Information collected from case records included signalment, tumor staging, tumor characteristics, type of surgical excision, histologic diagnosis, adjuvant therapy, and survival time.

**Results**—The overall median survival time was 346 days. Results of multivariate analysis indicated that tumor size, patient age, and intralesional excision (vs marginal, wide, or radical excision) were considered poor prognostic indicators. All other demographic and clinical variables were not significantly associated with survival time after adjusting for the aforementioned 3 variables. A clear survival benefit was not evident with any systemic adjuvant therapy, including vaccination against melanoma or chemotherapy; however, the number of dogs in each treatment group was small. Ninety-eight dogs received no postoperative adjuvant therapy, and there was no difference in survival time between dogs that did (335 days) and did not (352 days) receive systemic adjuvant therapy.

**Conclusions and Clinical Relevance**—For dogs with oral malignant melanoma, increasing tumor size and age were negative prognostic factors. Complete excision of all macroscopic tumor burden improved survival time. Long-term survival was possible following surgery alone. Although systemic adjuvant therapy was not found to improve survival time, this could have been due to type II error.
Placement of a caudal vena cava stent for treatment of Budd-Chiari–like syndrome in a 4-month-old Ragdoll cat

Sabrina N. Hoehne, Dr med vet; Milan Milovancev, DVM; Aleshia J. Hyde, DVM; Helio A. deMorais, DVM; Kate F. Scollan, DVM; Sarah Nemanic, DVM, PhD
Department of Clinical Sciences, College of Veterinary Medicine, Oregon State University, Corvallis, OR 97331. (Hoehne, Milovancev, Hyde, deMorais, Scollan, Nemanic)

Dr. Hoehne's present address is William R. Pritchard Veterinary Medical Teaching Hospital, School of Veterinary Medicine, University of California-Davis, Davis, CA 95616.

Dr. Hyde's present address is Linn Veterinary Hospital, 6022 Pacific Blvd SW, Albany, OR 97321.

The authors thank Jason Wiest for technical assistance.

Address correspondence to Dr. Milovancev (Milan.Milovancev@oregonstate.edu).

**Case Description**—A 16-week-old 1.5-kg (3.3-lb) sexually intact male Ragdoll kitten that had a 9-week history of marked modified transudate ascites was evaluated. A membranous obstruction of the caudal vena cava at the cranial aspect of the liver was identified via CT angiography.

**Clinical Findings**—Physical examination findings included a markedly distended abdomen and panting. Testing for circulating FIV antibody and FeLV antigen, a PCR assay for feline coronavirus performed on a sample of peritoneal fluid, and fecal flotation yielded negative results. A diagnosis of Budd-Chiari–like syndrome secondary to a membranous obstruction of the caudal vena cava was made.

**Treatment and Outcome**—The cat was anesthetized, and the subhepatic portion of the caudal vena cava was identified and accessed via median celiotomy and direct venipuncture. A 6F 8 × 24-mm balloon-expandable nitinol biliary stent was placed across the stenotic area under fluoroscopic guidance. The patient remained free of clinical signs at the last follow-up 13 months following the procedure.

**Clinical Relevance**—Budd-Chiari–like syndrome is a rare phenomenon in veterinary medicine, and congenital malformations should be considered in young feline patients with ascites. Computed tomography angiography proved to be a helpful adjunctive imaging technique to establish a diagnosis in this case. To the authors' knowledge, this is the first report of successful treatment of a congenital caudal vena cava obstruction by means of stent placement in a juvenile cat.
A retrospective evaluation of doxorubicin-based chemotherapy for dogs with right atrial masses and pericardial effusion

1. S. Ghaffari¹,
2. D. C. Pelio²,
3. A. J. Lange³,
4. J. W. Arndt¹,
5. J. D. Chretin¹,
6. S. C. Fiocchi⁴,
7. D. Bianco⁵ and
8. R. K. Nakamura⁶

OBJECTIVE

To report the outcome of doxorubicin-based chemotherapy as the sole treatment for dogs with echocardiographically identified right atrial masses and pericardial effusion.

METHODS

A retrospective study of case records of dogs with right atrial masses treated with doxorubicin. Dogs were excluded from the study if they had any type of surgery performed such as pericardiectomy or right atrial mass resection, or if their chemotherapy protocol did not include doxorubicin. The data collected included signalment, history, physical examination findings, diagnostic test results and long-term survival.

RESULTS

Dogs with right atrial masses and pericardial effusion that received doxorubicin-based chemotherapy alone had a median survival of 139.5 days (range 2 to 302 days). Chemotherapy side effects were frequent but mild.

CLINICAL SIGNIFICANCE

Doxorubicin-based chemotherapy alone appears to be a viable treatment option for dogs with echocardiographically identified right atrial masses and pericardial effusion.

Journal of Small Animal Practice

Investigation of the effects of a polymerised bovine haemoglobin solution on tension in isolated canine saphenous artery

1. P. Pawson and
2. F. J. Dowell

OBJECTIVES

To investigate the vasoconstriction induced by a polymerised bovine haemoglobin solution, Hb-200, in isolated canine arteries.

METHODS

Rings of canine saphenous artery, from euthanatized dogs, were mounted between stainless steel wires in Krebs’ solution (95% O₂, 5% CO₂, 37°C) for isometric tension recording. Following incubation with Hb-200, cumulative concentration response curves to phenylephrine (vasoconstrictor) and acetylcholine (vasodilator) were investigated. Responses to acute addition of Hb-200 were also examined in pre-constricted or pre-dilated arteries. Responses were further studied in the presence or absence of the endothelium, inhibitors of endothelium-dependent vasodilation (L-NAME, charybdotoxin and apamin), an endothelin antagonist (BQ-788) and the antioxidant superoxide dismutase.

RESULTS

Incubation with Hb-200 (0·2 or 2 g/L) significantly enhanced phenylephrine-induced contraction (decreasing half maximal effective concentration, EC₅₀, P=0·0035) and inhibited acetylcholine-induced relaxation (increasing EC₅₀, P<0·0001). Acute addition of Hb-200 (0·2 or 2 g/L) significantly increased tension in pre-constricted arteries (P=0·0059) and reversed relaxation in pre-dilated arteries (P=0·0005). These acute responses were abolished in endothelium-denuded arteries and arteries incubated with L-NAME. Responses to Hb-200 were unaffected by incubation with charybdotoxin and apamin, BQ-788, or superoxide dismutase.

CLINICAL SIGNIFICANCE

Low concentrations of Hb-200 enhance vasoconstriction in isolated canine saphenous artery, primarily by antagonism of nitric oxide. This effect may be detrimental in some dogs (e.g. those at risk of volume overload) but beneficial in others (e.g. those in septic shock).

Journal of Small Animal Practice

Volume 55, Issue 6, pages 301–308, June 2014
A retrospective study of positive pressure ventilation in 58 dogs: indications, prognostic factors and outcome

1. Y. Bruchim,
2. I. Aroch,
3. A. Sisso,
4. Y. Kushnir,
5. A. Epstein,
6. E. Kelmer and
7. G. Segev

Journal of Small Animal Practice


OBJECTIVES

To assess the usefulness of clinical and clinicopathological parameters as prognostic markers of survival in dogs undergoing positive pressure ventilation.

METHODS

Retrospective study of case records of 58 client-owned dogs undergoing positive pressure ventilation. Dogs were divided into two groups; inadequate oxygenation due to pulmonary parenchymal disease (Group 1) and inadequate ventilation (Group 2).

RESULTS

Median duration of positive pressure ventilation was 30 (range 10 to 136) hours. Survival rate was 32% (19 dogs). Survivors were significantly younger (P<0.005) and had significantly higher (P<0.002) median PaO_2/FiO_2 ratio at 4 to 12 hours postinitiation of positive pressure ventilation, and immediately before weaning (P<0.006) compared to non-survivors. A receiver operator characteristics analysis of PaO_2/FiO_2 immediately before weaning as predictor of survival had an area under the curve of 0.76 (95% confidence interval 0.54 to 0.97), with optimal cut-off point of 252 mmHg, corresponding to a sensitivity and specificity of 0.80 and 0.79, respectively. The survival rates of dogs with PaO_2/FiO_2 less than 200 mmHg at 4 to 12 hours postinitiation of positive pressure ventilation, or immediately before weaning were 15% (3/20 dogs) and 6% (1/16 dogs), respectively.

CLINICAL SIGNIFICANCE

The PaO_2/FiO_2 ratio is an early prognostic indicator of successful weaning in dogs undergoing positive pressure ventilation.
Computed tomographic appearance of canine thyroid tumours

1. K. Deitz¹,
2. L. Gilmour¹,
3. V. Wilke² and
4. E. Riedesel¹

Journal of Small Animal Practice

Volume 55, Issue 6, pages 323–329, June 2014

OBJECTIVES

To describe the computed tomography features of canine thyroid tumours.

METHODS Retrospective study of records of dogs with a thyroid tumour and neck computed tomography. Neck computed tomographies were evaluated for tumour characteristics. Thoracic radiographs and computed tomographies were evaluated for lung nodules.

RESULTS

Of 19 identified cases, 17 were carcinomas and 2 were adenomas; 12 had mineralisation, 16 had heterogeneous attenuation and 16 were unilateral. Tumours were located from the temporomandibular joint to C5. Sixteen had well-defined margins postcontrast. Tumours were ovoid and mean volume was 57.4 cm³. By computed tomography, eight had definitive or possible invasion into surrounding structures; all eight were histopathologically invasive carcinomas. Five histopathologically non-invasive tumours and two adenomas had no computed tomography invasion into surrounding structures. Four had complete palpable mobility (two adenomas and two histopathologically invasive carcinomas); one had computed tomography evidence of possible invasion. The sensitivity of palpable mass mobility to determine histopathological invasion was 71% with 0% specificity. The sensitivity of computed tomography invasion to determine histopathological invasion was 70% with 100% specificity.

CLINICAL SIGNIFICANCE

Computed tomography scans revealed several common features. Palpable mass mobility was not definitive for lack of histopathological invasion. Computed tomography invasion was specific but not very sensitive for histopathological invasion.
Guidelines for Recognition, Assessment and Treatment of Pain

WSAVA Global Pain Council members and co-authors of this document:

1. Karol Mathews DVM DVSc DACVECC (Canada),
2. Peter W Kronen Dr Vet Med, DVM DECVA (Switzerland),
3. Duncan Lascelles BSc BVSc PhD DSAS DECVS DACVS MRCVS (USA),
4. Andrea Nolan MVB DVA PhD DECVA DECVP MRCVS (UK),
5. Sheilah Robertson BVMS (Hons) PhD DACVAA DECVA DECWBM (WSEL) DACAW MRCVS (USA),
6. Paulo VM Steagall MV MS PhD DACVAA (Brazil/Canada),
7. Bonnie Wright DVM DACVAA (USA) and
8. Kazuto Yamashita DVM MS PhD DJCVS (Japan)

*Journal of Small Animal Practice*

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Article available free online
Risk factors for postoperative complications following bilateral closed anal sacculectomy in the dog

1. T. M. Charlesworth

Journal of Small Animal Practice


OBJECTIVES

To report the complication rate for bilateral closed anal sacculectomy in the dog and to evaluate potential risk factors for the development of postoperative complications. To identify breed groups at risk of requiring anal sacculectomy.

METHODS

A retrospective review of medical records of dogs undergoing bilateral closed anal sacculectomy between 2003 and 2013.

RESULTS

Sixty-two dogs were included in the study of which 32·3% developed mild and self-limiting complications including 14·5% dogs that experienced postoperative defaecatory complications. No dog developed permanent faecal incontinence. Dogs less than 15 kg bodyweight were more likely to develop postoperative complications. Dogs that used gel to distend the anal sac were more likely to have postoperative complications than those that did not. Previous abscess formation, recurrent disease and pretreatment with antibiotics had no significant effect on postoperative complication rates. Cavalier King Charles spaniels and Labrador-type dogs were over-represented within this study population.

CLINICAL SIGNIFICANCE

Anal sacculectomy is a safe procedure with a relatively high rate of short-term but self-limiting, minor, postoperative complications. Smaller (<15 kg) dogs are more likely to experience postoperative complications but the risk of permanent faecal incontinence is low.
Diagnostic value of MRI in dogs with inflammatory nasal disease

A. R. R. Furtado¹,
A. Caine² and
M. E. Herrtage³

*Journal of Small Animal Practice*


**OBJECTIVES**

To determine the value of low-field magnetic resonance imaging in differentiating sino-nasal aspergillosis from lymphoplasmacytic rhinitis in dogs.

**METHODS**

A retrospective study of 41 dogs (25 with lymphoplasmacytic rhinitis and 16 with sino-nasal aspergillosis) that underwent magnetic resonance imaging scan of the nasal cavity was conducted. On magnetic resonance imaging, turbinate destruction was classified as mild, moderate or severe. The cribriform plate and vomer destruction were classified as present or absent. The intensity of fluid accumulation and turbinates was classified on T1-weighted and T2-weighted images as hypointense, hyperintense and isointense based on the brightest area on the same slice.

**RESULTS**

Turbinate destruction was significantly \((P=0.005)\) associated with sino-nasal aspergillosis. On T1-weighted images, sino-nasal aspergillosis was associated with turbinate hyperintensity, while lymphoplasmacytic rhinitis was significantly \((P=0.007)\) associated with hypointensity. On T2-weighted images, this feature was shown not to be relevant.

**CLINICAL SIGNIFICANCE**

This study has demonstrated that turbinate destruction is the most reliable feature to differentiate sino-nasal aspergillosis from lymphoplasmacytic rhinitis and that T1-weighted image was the most useful sequence.
Comparison of urine and bladder or urethral mucosal biopsy culture obtained by transurethral cystoscopy in dogs with chronic lower urinary tract disease: 41 cases (2002 to 2011)

1. K. F. Sycamore,
2. V. R. Poorbaugh,
3. S. S. Pullin and
4. C. R. Ward

Journal of Small Animal Practice


OBJECTIVES

To compare aerobic bacterial culture of urine to cystoscopically obtained mucosal biopsies of the lower urinary tract in dogs.

METHODS

Retrospective review of case records from dogs that had transurethral cystoscopy at a veterinary teaching hospital between 2002 and 2011. Dogs that had culture results from cystocentesi obtained urine and transurethral cystoscopically obtained mucosal samples were included in the study. Pathogens identified were compared between sampling methods.

RESULTS

Forty dogs underwent transurethral cystoscopy for lower urinary tract disease on 41 occasions. There was significant (P = 0.0003) agreement between urine and mucosal biopsy cultures. Both cultures were negative in 66% and positive in 17% of dogs. There was a 17% disagreement between the sampling methods. Although not statistically significant, more mucosal samples than urine cultures were positive for Escherichia coli.

CLINICAL SIGNIFICANCE

There was a good agreement between pathogen identification from urine and lower urinary tract mucosal cultures. These results do not support the utilisation of transurethral cystoscopy to obtain biopsy samples for culture in dogs with urinary tract infection and positive urine culture. Individual cases with possible chronic urinary tract infection and negative urine culture may benefit from transurethral cystoscopy to obtain biopsies for culture.
Congenital lymphangiomatosis and an enteric duplication cyst in a young dog

A two-year-old female poodle with abdominal distention was diagnosed with concurrent enteric duplication cyst and lymphangiomatosis. Both lesions were shown as cystic structures, but some characteristic features of enteric duplication cyst were identified including a thick cyst wall and shared blood supply with the duodenum. Although it was challenging to discriminate between the types of cyst based on diagnostic imaging, this report describes the characteristics of each type of lesion using several different imaging modalities.
Subtotal epiglottectomy for the management of epiglottic retroversion in a dog

1. R. Mullins†,
2. A. B. McAlinden‡ and
3. M. Goodfellow

Journal of Small Animal Practice


A six-year-old male neutered Yorkshire terrier was evaluated for severe, acute-onset, inspiratory dyspnoea. Laryngoscopy revealed retroversion of the epiglottis with intermittent occlusion of the rima glottidis during inspiration. The dog underwent both temporary and permanent epiglottopexy procedures that were unsuccessful. Subtotal epiglottectomy was performed and resulted in permanent resolution of dyspnoea without evidence of dysphagia or aspiration. This case highlights potential complications associated with management of this condition as well as describing the successful use of subtotal epiglottectomy in the dog.
Prospective study to investigate the use of fine needle aspiration techniques in UK veterinary practice

1. K. L. Bowlt,
2. R. Newton†,
3. S. Murphy‡,
4. L. Blackwood§ and
5. M. Starkey¶

Journal of Small Animal Practice

Volume 55, Issue 8, pages 409–414, August 2014

Objectives

To document the fine needle aspiration methods used by UK veterinary practitioners for the assessment of cutaneous masses and relate this to the achievement of a representative sample.

Methods

An internet-based questionnaire was designed and publicised in the UK national veterinary press, at a national surgical meeting, and in letters to veterinary surgeons.

Results

One hundred and seventy respondents replied to the questionnaire: 58 · 2% sampled cutaneous masses on the basis of appearance or behaviour; 41 · 3% sampled every cutaneous mass. Practitioners with a greater oncological caseload or who graduated more recently were more likely to recommend fine needle aspiration for every cutaneous mass (P = 0 · 019 and P = 0 · 0002 respectively); 66 · 5% of respondents applied suction during fine needle aspiration; 89% of all respondents used a 2 or 5 mL syringe in combination with a 21 or 23 G needle. There was no statistically significant association between achievement of a representative sample and syringe (P = 0 · 64) or needle size (P = 0 · 63).

Clinical Significance

Fine needle aspiration is widely used in UK practice, but may be underutilised in practices with lower oncological caseloads. Survey participants reported a high rate of representative samples obtained using all the commonly used techniques. Further work is required to confirm these observations.
In vitro comparison of output fluid temperatures for room temperature and prewarmed fluids

1. N. Soto¹,
2. H. A. Towle Millard¹,
3. R. A. Lee¹ and
4. H. Y. Weng¹

**Objective**

To determine if prewarmed intravenous fluids produce superior fluid output temperatures compared with room temperature fluids at common anaesthetic fluid rates for small animal patients.

**Methods**

A prospective, randomised, in vitro fluid line test-vein study was performed. Nine flow rates were analysed (10, 20, 60, 100, 140, 180, 220, 260 and 300 mL/hour) for room temperature fluids (21°C) and for five prewarmed fluids (40, 45, 50, 55 and 60°C).

**Results**

For each flow rate tested, room temperature fluids never exceeded 25°C at any time point for each trial (range 18 to 25°C). For each flow rate tested, prewarmed fluids never exceeded 25 · 5°C at any time point for each trial (range 18 to 25 · 5°C). The mean output fluid temperature of prewarmed fluids was significantly warmer than room temperature fluids only at 300 mL/hour for 40°C (P = 0 · 0012), 45°C (P = 0 · 004), 50°C (P = 0 · 0002), 55°C (P = 0 · 0001) and 60°C (P < 0 · 0001).

**Clinical Significance**

There was no thermodynamic benefit to utilising prewarmed intravenous fluids (up to 60°C) compared with room temperature intravenous fluids at common anaesthetic fluid rates for small animals.

Journal of Small Animal Practice

*Volume 55, Issue 8, pages 415–419, August 2014*
Venous air embolism detected on computed tomography of small animals

1. H. G. Heng
2. J. D. Ruth
3. K. Lee

Journal of Small Animal Practice

Volume 55, Issue 8, pages 420–423, August 2014

Objective

To describe the prevalence, location and clinical significance of abnormal gas accumulations in dogs and cats detected on computerised tomography images.

Methods

Retrospective evaluation of all canine and feline computed tomography examinations (292 pre-contrast and 219 post-contrast) performed in a 12-month time period. All studies were evaluated for the presence of venous air emboli. The location of intravenous gas was noted and the volume of intravenous air emboli was estimated visually. The medical records of animals with venous air embolism were reviewed for signs of cardiopulmonary complications.

Results

The overall prevalence of air embolism on pre- and incidence on post-contrast images was 4.5 and 2.3%, respectively. The prevalence of air embolism on pre-contrast and incidence on post-contrast thoracic images was 35.7 and 14.2%, respectively. The volume of venous air was generally small and the most common was in an axillary vein. None of the animals had any cardiopulmonary complications.

Clinical Significance

The presence of small volume venous air embolism on routine computed tomography examinations is a frequent incidental finding that does not appear to cause cardiopulmonary complications.
Transrectal bladder prolapse secondary to pelvic fracture in two dogs

1. L. Z. Crivellenti\textsuperscript{1,2},
2. M. P. Silveira\textsuperscript{2},
3. A. N. Silva\textsuperscript{2},
4. S. Borin-Crivellenti\textsuperscript{1},
5. T. M. M. Raposo\textsuperscript{1} and
6. D. K. Honsho\textsuperscript{2}

Journal of Small Animal Practice

Volume 55, Issue 8, pages 424–426, August 2014

This report describes the exteriorisation of the urinary bladder in two dogs as a result of a laceration of the rectum from a traumatic pelvic fracture. Clinical examination and contrast radiography of the bladder were used as diagnostic tools. Both patients were treated with exploratory laparotomy, where traction of the bladder was utilised to pull the bladder through the traumatic rectal laceration allowing the organ to return to its normal anatomical position. This procedure was followed by surgical reconstruction of the rectum, resulting in effective resolution of each case.
Laparoscopic treatment of persistent inguinal haemorrhage after prescrotal orchietomy in a dog

1. A. Koenraadt,
2. L. Stegen,
3. T. Bosmans and
4. B. Van Goethem

Journal of Small Animal Practice

Volume 55, Issue 8, pages 427–430, August 2014

A one-year-old male Jack Russell terrier developed a prescrotal haematoma after elective orchietomy. When surgical exploration failed to locate the responsible vessel and conservative therapy (applying a pressure bandage) was not successful in stabilising the dog, abdominal laparoscopy was performed. The haemorrhage originated from the spermatic cord in the inguinal canal bilaterally. After retracting the spermatic cord into the abdomen, haemostasis was performed using a vessel-sealing device. The prescrotal haematoma was removed and the dog made an uncomplicated recovery.
Intranasal epidermoid cyst causing upper airway obstruction in three brachycephalic dogs

1. D. Murgia,
2. M. Pivetta,
3. K. Bowlt,
4. C. Volmer,
5. A. Holloway and
6. R. Dennis

Journal of Small Animal Practice


This case report describes three brachycephalic dogs with intranasal epidermoid cysts that were causing additional upper airway obstruction. Although epidermoid cysts have been described in several locations in dogs, to the authors’ knowledge intranasal epidermoid cysts have not been previously reported. All dogs had mucopurulent to haemorrhagic nasal discharge. Magnetic resonance imaging of the head revealed the presence of unilateral or bilateral intranasal cystic lesions obstructing the nasal cavities partially or completely, with atrophy of the ipsilateral nasal turbinates. The cystic lesions were surgically excised in all dogs using a modified lateral alveolar mucosal approach to the affected nasal cavity. Aerobic, anaerobic and fungal culture of the cystic contents were negative and histology of the excised tissue was consistent with a benign intranasal epidermoid cyst in each dog. Upper airway obstruction was clinically improved in two dogs.
Urethral Prolapse in Dogs: A Retrospective Study

Jennifer G. Carr1, DVM, Karen M. Tobias2, DVM, MS, Diplomate ACVS, and Laura Smith3, BVMS

E-mail: jcarrdvm@gmail.com

Objective: To evaluate the signalment, clinical signs, treatment, and outcome of dogs with urethral prolapse and identify risk factors associated with prolapse or treatment.

Study Design: Retrospective case series.

Animals: Dogs (n = 48) with urethral prolapse.

Methods: Medical records (May 1995–June 2010) from 2 referral centers were reviewed. Retrieved data included signalment, clinical signs, laboratory findings, treatment, complications, results of long-term follow-up. Records from Veterinary Medical Data Base (VMDB) were evaluated to determine odds ratios.

Results: Odds ratio for urethral prolapse in English bulldogs compared to all breeds was 366.99 (95% CI: 265.83, 506.65). Of 48 affected dogs, 46 had either resection and anastomosis (43 dogs) or urethropexy (3 dogs). The most common early postoperative complication was hemorrhage (39%); postoperative hemorrhage was less common when a simple continuous pattern was used for resection and anastomosis. Prolapse recurred in 57% of dogs available for long-term follow-up; recurrence was less common in dogs that were administered postoperative butorphanol or acepromazine. Gender was not associated with urethral prolapse or postoperative complications.

Conclusions: Urethral prolapse occurs most commonly in English bulldogs. Postoperative hemorrhage and prolapse recurrence may be reduced with use of a simple continuous pattern for urethral anastomosis and by administration of postoperative sedation, respectively. Castration status did not appear to affect prolapse development or outcome. Veterinary Surgery 43 (2014) 574–580
Surgical Repair of a Congenital Sternal Cleft in a Cat

Ilona Schwarzkopf1, DVM, PhD, Valerie C. A. Bavegems2, DVM, PhD, Peter M. F. P. Vandekerckhove1, DVM, Diplomate ECVS, Sanne M. Melis2, DVM, Pieter Cornillie3, DVM, PhD, and Hilde de Rooster2, DVM, PhD, Diplomate ECVS

E-mail: ilona.schwarzkopf@gmail.com

Objective: To describe the clinical findings, diagnosis, and treatment of an incomplete cleft of the 5th–8th sternebra and a cranioventral abdominal wall hernia in a 2 month old Ragdoll kitten and to evaluate the short- and long-term outcome.

Study Design: Clinical report.

Animals: Ragdoll cat (n = 1), 2 months old.

Methods: Sternal cleft was confirmed by thoracic radiographs. Computed tomography (CT) was used to plan an optimal surgical approach. A ventral median incision was made, starting at the 3rd sternebra and extended into the abdomen. Ostectomy of the proximal part of the 5th left sternebra was performed. Lateral periosteal flaps were created, unfolded, and absorbable monofilament sutures preplaced to facilitate closure and the repair was reinforced by 2 peristernal sutures. A bone graft was applied, and the free margin of the omentum was sutured to the cranial aspect of the wound.

Results: No major complications occurred. At 3 weeks, CT scan confirmed approximation of the hemisternebrae and at 10 months, complete fusion of the hemisternebrae had not occurred, but a strong connection of the sternal bars was present.

Conclusion: Sternal cleft is a rare congenital abnormality that can be corrected surgically with favorable outcome. Veterinary Surgery 43 (2014) 623–629
Pancreatic Islet Transplantation: From Dogs to Humans and Back Again

Daniela Vrabelova, DVM, MS, Christopher Adin, DVM, Diplomate ACVS, Chen Gilor, DVM, PhD, Diplomate ACVIM, and Amer Rajab, MD, PhD Department of Veterinary Clinical Sciences, Ohio State University, Columbus

E-mail: adin.1@osu.edu

Pancreatic islet transplantation is a cell-based therapy that provides a potential cure for type 1 diabetes mellitus. After the introduction of an automated method for islet isolation and steroid-free immunosuppressive protocols, reversal of diabetes by islet transplantation is now performed at major human medical centers around the world. Despite extensive use of animal models in islet transplantation research, practical concerns have slowed the introduction of the technique into clinical veterinary practice and only a small number of studies have reported results of transplantation in dogs with spontaneously occurring diabetes mellitus; however, recent advances in islet isolation and encapsulation may make it possible to perform islet transplantation without immunosuppression in companion animals. This review summarizes experimental and clinical studies of pancreatic islet transplantation in dogs, including future directions for cell therapy in animals with naturally occurring disease. Veterinary Surgery 43 (2014) 631–641
The Effect of Photodynamic Therapy on Cisterna Chyli Patency in Rats

1. Eric A. Rowe DVM
2. Kyle G. Mathews DVM, MS, Diplomate ACVS
3. Keith E. Linder DVM, PhD, Diplomate ACVP
4. Lloyd P. Tate VMD, Diplomate ACVS

Veterinary Surgery

Volume 43, Issue 6, pages 642–649, August 2014

Objective

To radiographically and histologically evaluate the effects of photodynamic therapy on the cisterna chyli in rats.

Study Design

Experimental study.

Animals

Adult male Sprague-Dawley rats (n = 60).

Methods

Cecal lymph nodes were injected with the photodynamic compound verteporfin. A 690 nm, 500 mW diode laser was then directed at the area of the cisterna chyli for either 0, 1.5, or 3 minutes. Cisterna chyli patency was evaluated using lymphography, and histologic changes were evaluated on postoperative Days 1, 3, 5, 7, and 14.

Results

Histologically, minimal to marked injury to the cisternal and/or pericisternal tissues was present in all treated rats at all time periods. Radiographically, 8/20 cisternae were occluded in the 1.5-minute treatment group (including 1/4 on Day 1, 2/4 on Day 3, 3/4 on Day 5, 0/4 on Day 7, and 2/4 on Day 14), and 9/20 cisternae were occluded in the 3-minute treatment group (including 0/4 on Day 1, 1/4 on Day 3, 3/4 on Day 5, 3/4 on Day 7, and 2/4 on Day 14). There was minimal to no histologic evidence of tissue injury in control rats. All control cisternae were radiographically open.

Conclusions

Further investigations into the timing of laser application and light dose, or alternative photodynamic agents are required to limit injury to adjacent tissues and to improve the effectiveness of cisternal photoablation.
Retrospective Analysis of the Learning Curve Associated With Laparoscopic Ovariectomy in Dogs and Associated Perioperative Complication Rates

Juliet Frances Anne Pope1, BVSc, CertSAS, MRCVS, and Toby Grahame Knowles2

E-mail: julietpope@hotmail.com

Objective: To assess the learning curve associated with laparoscopic ovariectomy (LOE) in 618 dogs and to report perioperative complication rates.

Study Design: Case series.

Animals: Dogs (n = 618).

Methods: Data retrieved from the medical records of bitches admitted for LOE over 42 months included date of surgery, breed, weight (kg), age (months), surgeon, suture material used, intraoperative complications and postoperative complications. Each LOE was defined as “successful” or “unsuccessful” by the absence or presence of an intraoperative complication and “failure” rate described using a CUSUM technique.

Results: Follow-up time ranged from 152 to 1,435 days (median, 737 days).

Intraoperative complications occurred in 10 dogs (1.6%) and included: splenic laceration (6 dogs; 1%), urinary bladder perforation (3 dogs; 0.5%), and subcutaneous emphysema (1 dog; 0.2%). Postoperative complications occurred in 99 dogs (16%) and included: incisional inflammation treated with antibiotics (87 dogs [14%]; 96/1,854 incisions; 5.1%), incisional seroma (5 dogs [0.8%]; 5/1,854 incisions, 0.3%), incisional hernia (4 dogs [0.6%]; 4/1,854 incisions, 0.2%), and ovarian remnant syndrome (3 dogs; 0.5%). CUSUM charts indicated an initial “learning curve” of 80 LOE.

Conclusions: LOE is a technique with an initial learning curve but once surgical proficiency is reached after 80 procedures then intraoperative complication rates associated with the procedure can be low. Veterinary Surgery 43 (2014) 668–677
Less Invasive Unilateral Arytenoid Lateralization: A Modified Technique for Treatment of Idiopathic Laryngeal Paralysis in Dogs: Technique Description and Outcome

Dirsko J. F. von Pfeil1,2, Dr Med Vet, DVM, Diplomate ACVS, Diplomate ECVS, Michael R. Edwards1,2, DVM, MS, Diplomate ACVS, and Loïc M. Déjardin2, DVM, MS, Diplomate ACVS, Diplomate ECVS

E-mail: vsc.dvpfeil@gmail.com

Objective: To (1) describe a modification of conventional unilateral cricoarytenoid lateralization (UCAL), called less-invasive unilateral cricoarytenoid lateralization (LI-UCAL) for treatment of idiopathic laryngeal paralysis (LP); (2) report clinical outcome of LI-UCAL; and (3) describe the effect of early discharge after surgery.

Study Design: Retrospective clinical study.

Animals: Dogs (n = 22).

Methods: Medical records (January 2009 to October 2011) of dogs diagnosed with idiopathic LP that had LI-UCAL were reviewed. Signalment, clinical signs, laboratory tests, imaging, concurrent medical conditions, information from the anesthesia record, and hospitalization time were documented. Follow-up was obtained by direct examination, questionnaire, and review of medical records from referring veterinarians.

Results: Dogs included in the study had variable degrees and duration of respiratory distress before surgery. Median surgery time was 32 minutes. Median hospitalization was 6 hours, and median follow-up was 427 days. Long-term respiratory function, as reported by owners at last follow-up, improved in 95.5% of dogs after surgery; exercise tolerance improved by 90%. Major complications included death secondary to aspiration pneumonia (9%), aspiration pneumonia from which dogs recovered within 3 days after administration of antimicrobials (9%), and development of right-sided laryngeal collapse that required right sided LI-UCAL (4.5%). At long-term follow-up, 95.5% of owners were satisfied with the surgical outcome.

Conclusion: LI-UCAL is a feasible surgical technique and resulted in improvement of clinical signs related to LP. Calm recoveries without adverse effects such as respiratory distress were associated with early discharge. LI-UCAL could be considered an alternative to conventional UCAL. Veterinary Surgery 43 (2014) 704–711
Autologous Platelet Gel to Treat Chronic Decubital Ulcers: A Randomized, Blind Controlled Clinical Trial in Dogs

Adolfo Maria Tambella, DVM, Anna Rita Attili, DVM, Fabrizio Dini, DVM, Angela Palumbo Piccionello, DVM, PhD, Cecilia Vullo, DVM, PhD, Evelina Serri, BSc, Paolo Scrollavezza, DVM, PhD, and Gilles Dupré, DVM, Diplomate ECVS

E-mail: adolfomaria.tambella@unicam.it.

Objective: To determine the efficacy of topical application of the autologous platelet gel (PG) in canine chronic protracted decubital ulcers.

Study Design: Prospective, randomized, blind controlled clinical trial.

Animals: Dogs (n = 18) with bilateral chronic wounds caused by protracted decubitus ulcers.

Methods: For each dog, wound side was randomized to receive either platelet gel (group PG) every 5 days for 5 dressing changes, or paraffin gauzes dressings (group C), as negative control. Wound healing and wound surfaces were compared at admission and then evaluated every 5th day, until day 25. Outcome variables were: open wound area, reduction of open wound surface compared to admission and to each preceding dressing change, time to complete epithelialization.

Results: Significant differences in healing process were observed at day 5 and continued throughout the entire study period (P <.00001). At 25 days, mean percent reduction in wound area was 93.5% in group PG and 13.2% in group C (P <.00001).

Conclusions: Appropriately prepared autologous PG, an inexpensive, readily available blood derivative, applied topically results in more rapid healing of chronic non-healing decubital ulcers in dogs than those treated by use of paraffin-impregnated gauzes. Veterinary Surgery 43 (2014) 726–733
Arthroscopic Biceps Ulnar Release Procedure (BURP): Technique Description and In Vitro Assessment of the Association of Visual Control and Surgeon Experience to Regional Damage and Tenotomy Completeness

David M. Wilson1, DVM, Clara S.S. Goh1, BVSc, MS, Diplomate ACVS, and Ross H. Palmer1,2, DVM, MS, Diplomate ACVS

E-mail: ross.palmer@colostate.edu

Objectives: (1) Describe arthroscopic BURP surgical technique, (2) assess association of visual control and surgeon experience to tenotomy completeness and regional iatrogenic tissue damage.

Study Design: Cadaveric study.

Sample Population: Canine cadavers weighing >20 kg (n = 16; 32 elbows).

Methods: Phase 1 = dissection/anatomic description/procedural refinement (n = 6). Phase 2 = technique description (n = 6). Phase 3 = association of surgeon experience and procedural visual control to tenotomy completion and regional iatrogenic damage (n = 20). Elbows were randomly assigned via coin toss to an experienced- or inexperienced-arthroscopist. Using conventional medial portals, surgeons sought to identify the medial collateral ligament (MCL) and ulnar insertion of the biceps tendon (uBT) before attempting complete tenotomy. Upon procedural completion, surgeons assigned a standardized “visual control score” (VCS) describing viewing that governed procedure and predicted % uBT release, MCL, and median nerve damage. Post-procedural dissection determined actual tenotomy completion and iatrogenic tissue damage. Results: Complete BURP was achieved in 16 of 19 elbows. VCS was associated with tenotomy completeness (P <.01). “Blind” BURP was incomplete in both elbows in which it was attempted. Perception of complete BURP was associated with complete release (P <.01). MCL damage occurred in 10% of elbows. Surgeon experience did not influence VCS, regional damage, or BURP completeness.

Conclusion: In canine cadavers, arthroscopic BURP can be consistently performed using conventional arthroscopic instruments and portals by both experienced and inexperienced arthroscopists when visual control guides the tenotomy into the distal aspect of the tendon. Veterinary Surgery 43 (2012) 734–740
**Effect of Vascular Seal Configuration Using the LigaSure on Arterial Challenge Pressure, Time for Seal Creation, and Histologic Features**

Brad M. Matz1, DVM, MS, Diplomate ACVS, D. Michael Tillson1, DVM, MS, Diplomate ACVS, Harry W. Boothe1, DVM, MS, Diplomate ACVS, Ray A. Dillon1, DVM, MS, MBA, Diplomate ACVIM, and Russell C. Cattley2, DVM, PhD, Diplomate ACVP

E-mail: bmm0007@tigermail.auburn.edu

**Objective:** To determine the effectiveness of a vascular sealing technology on canine carotid arteries using various seal configurations to achieve maximal vessel security.

**Study Design:** Ex-vivo study.

**Animals:** Dogs (n = 20).

**Methods:** Carotid arteries (n = 40) were removed from the mid-cervical region of recently euthanatized dogs. Harvested vessels were closed with 2 circumferential ligatures (Group 1) or a vascular sealing device using 1 of 4 seal configurations of 1 or 2 seals combined with 1 or 2 machine activations/seal. The artery was instrumented to measure intraluminal pressure to evaluate the security of each seal during saline infusion. Maximum intraluminal pressure was recorded for each group, and time for application of each sealing protocol was compared using 1-way ANOVA and Tukey’s test for multiple comparisons. Histologic features of the sealing protocols were evaluated.

**Results:** Arterial closures for each group were effective in preventing leakage up to 300 mmHg. There was no significant difference in maximum intraluminal pressure between any group. A significant difference (P < .001) was observed for time to seal creation between the groups using 1 and 2 seals. Histologic evaluation showed no differences between the different sealing protocols.

**Conclusion:** Vessel sealing using a single seal created with a single activation cycle was adequate for sealing canine carotid arteries. Histologic examination did not demonstrate any disadvantages to multiple seals or multiple cycle activations. *Veterinary Surgery* 43 (2014) 761–764
Indwelling double pigtail ureteral stent combined or not with surgery for feline ureterolithiasis: complications and outcome in 15 cases

Mathieu Manassero1, Adeline Decambron1, Véronique Viateau1, Anne-Sophie Bedu2, Rosario Vallefuoco1, Ghita Benchekroun3, Pierre Moissonnier1 and Christelle Maurey3

Abstract

Ureteral obstruction secondary to ureterolithiasis in cats is a challenging situation. Ureteral stenting has recently been introduced to prevent complications that often occurred after ureterotomy or other invasive surgeries. The purpose of this study is to describe the stenting technique and perioperative difficulties, as well as long-term outcome and complications with ureteral stenting in 12 cats with ureteroliths. Fifteen 2.5 Fr soft double pigtail multi-fenestrated ureteral stents were placed in an anterograde fashion under open surgical approaches and with fluoroscopic guidance in 12 cats. Nine cats received a unilateral stent and three received bilateral stents. Ureterotomy or ureteral resection and end-to-end anastomosis were performed in three and four cases, respectively. In six cats, papillotomy was performed to facilitate dilator and stent placement. All cats recovered well from the surgical procedure, except one cat, which died during the anaesthesia recovery period. Postoperative complications included dysuria (three cases, diagnosed at 15 days, 1 month and 3 months, respectively), urinary tract infection (one case, 1 month after surgery), stent migration requiring stent replacement (one case, 19 months after surgery) and stent obstruction requiring stent removal (three cases with previously end-to-end anastomosis between 2 and 8 months after surgery). Nine cats (75%) were alive at a mean follow-up of 453 ± 194 (123–720) days. The median survival time was >415 days. Stent placement appeared to be a valuable and safe option for treating ureteral obstruction in cats. However, periodic and long-term monitoring of stents is warranted.

Journal of Feline Medicine and Surgery

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Per-endoscopic trans-tympanic traction for the management of feline aural inflammatory polyps: a case review of 37 cats

Valentina Greci1, Erika Vernia2 and Carlo M Mortellaro3

Abstract

Feline aural inflammatory polyps are benign growths originating from the tympanic cavity or the Eustachian tube. They usually occur in young cats, which present either signs of otitis externa and otitis media, or respiratory signs, depending on the direction of polyp growth. Neurological signs are also reported. Simple traction and ventral bulla osteotomy (VBO) are the most common techniques used for treating this condition in cats; corticosteroids are recommended to reduce risk of recurrence given the inflammatory nature of the disease. The most common complications after treatment are Horner’s syndrome, polyp recurrence and facial nerve paralysis. The aim of this report is to describe the per-endoscopic trans-tympanic traction (PTT) technique for treating feline aural inflammatory polyps and to report the short- and long-term follow-up of this procedure. PTT allowed resolution of the aural inflammatory polyps in 94% of cats during a mean long-term outcome of 19 months. Three cats (8%) developed Horner’s syndrome immediately after the PTT procedure, which resolved within a few weeks, and five cats had polyp recurrence (13.5%). Only two cats had a poor outcome and were diagnosed with chronic otitis media at 22 months, and chronic otitis media and polyp recurrence at 46 months after the PTT procedure, respectively. PTT was shown to be an effective technique for treating aural inflammatory polyps and registered fewer neurological complications (8%) than VBO (57–81%) or simple traction (43%), and a recurrence percentage (13.5%) similar to VBO (0–33%) and much lower than traction alone (57%).

A survey of owners’ perceptions and experiences of radioiodine treatment of feline hyperthyroidism in the UK

Lara A Boland1, Jane K Murray1, Catherine PV Bovens1 and Angie Hibbert2

Abstract

The efficacy of radioiodine treatment of feline hyperthyroidism is well established; however, limited information is known about owners’ perceptions or experiences of radioiodine. This study aimed to examine factors that influence owner treatment choices and their opinions following radioiodine. Surveys were sent to owners of cats referred for radioiodine treatment between 2002 and 2011 (radioiodine group; 264 cats) and owners of non-radioiodine-treated hyperthyroid cats seen at first-opinion practices (control group; 199 cats). The response rate was 67.0% (310 returned: 175 radioiodine, 135 control). Of 135 controls, 72 (53.3%) were unaware of radioiodine as a treatment option. Owners of cats ≥15 years old and uninsured cats were less likely to pursue radioiodine. Cost of treatment, travel distance, potential human or animal health risks and waiting periods for radioiodine had a low impact on owners’ treatment choice. Owners reported a moderate level of concern about treatment hospitalisation length, which included (158 respondents) the possibility of the cat being unhappy 130 (82.3%), owner missing the cat 102 (64.6%), inappetence 50 (31.6%), other pets missing the cat 32 (20.3%), development of co-morbid disease 28 (17.7%) and side effects 25 (15.8%). Owners assessed their cat’s quality of life on a scale of 1 (very poor) to 10 (excellent), as 4 (4) (median [interquartile range]) pre-radioiodine (134 respondents) and 9 (2) post-radioiodine (131 respondents). Of 132 respondents, 121 (91.7%) were happy with their decision to choose radioiodine. The results of this questionnaire may assist veterinarians in addressing common owner concerns when discussing radioiodine as a treatment option for hyperthyroidism.

Evaluation of low-dose metronomic (LDM) cyclophosphamide toxicity in cats with malignant neoplasia
Chiara Leo1, Anneliese Stell1, Juan Borrego2,3, Elena Martinez de Merlo4, Katja Ruess-Melzer5 and Ana Lara-Garcia1

Abstract

Oral administration of low-dose cyclophosphamide in pets with spontaneously occurring malignant neoplasms has become a common practice in veterinary medicine. The purpose of this retrospective study was to investigate toxicity events in cats with spontaneous malignancies receiving cyclophosphamide as a metronomic therapy for at least 1 month. The number and severity of clinical, haematological and biochemical adverse events were recorded according to the Veterinary Cooperative Oncology Group’s Common Terminology Criteria for Adverse Events v1.1 classification scheme. Twenty-four cats were enrolled in the study with a total number of 27 neoplasms: 13 sarcomas, 12 carcinomas, one melanoma and one neuroendocrine tumour. Seventeen cats resented with macroscopic disease, while seven had microscopic disease. Seven cats (29%) had metastasis either to the regional lymph nodes and/or distant sites at the time of study enrolment. Additional medications, administered concurrently, included non-steroidal anti-inflammatory drugs (17), toceranib (4) and thalidomide (7). Four cats showed grade I gastrointestinal toxicity during the first month of treatment, which was controlled with antiemetics. Overall, 2/24 cats (8%) showed grade I haematological toxicities and 1/24 (4%) showed grade I renal toxicity in the first 4 weeks. Median follow-up for all cats was 30 days (range 30–360 days). For the 15 cats with follow-up longer than 1 month the only additional toxicities observed were two grade III and one grade II azotaemia that occurred after 2 months of therapy. Low-dose cyclophosphamide seems to be a well-tolerated option for cats bearing primary or metastatic tumours. Evaluation of toxicity after long-term administration is still needed.

Constrictive pericarditis following surgical repair of a peritoneopericardial diaphragmatic hernia in a cat

Lisa A Murphy1, Nicholas J Russell2, Michelle I Dulake3 and Reid K Nakamura4

Abstract

A 4-year-old female spayed domestic longhair cat was referred for dyspnea. Further diagnostics revealed severe pleural effusion and a peritoneopericardial diaphragmatic hernia (PPDH). Following surgical correction of the PPDH the pleural effusion persisted. Re-check echocardiogram 4 weeks after initial evaluation revealed leftward deviation of the interventricular septum and interatrial septum occurring with inspiration. There were also exaggerated phasic changes in trans-tricuspid flow velocities suggestive of constrictive pericardial disease. Cardiac catheterization was performed and revealed elevated pressures in the right atrium and right ventricle. Constrictive pericarditis (CP) and epicarditis was confirmed at surgery, where subtotal pericardiectomy was performed with epicardial decortication. The cat continued to develop recurrent pleural effusion after surgery, although the volume and frequency of recurrence slowed over time. This is the first reported case of CP following PPDH repair in a cat.

Atypical, abscessated nasopharyngeal polyp associated with expansion and lysis of the tympanic bulla

Joanna L Pilton1, Charles J Ley2, Katja Voss1, Mark B Krockenberger1, Vanessa R Barrs1 and Julia A Beatty1

Abstract

A 5-year-old, male neutered domestic shorthair cat was referred for investigation of lethargy, weight loss, pyrexia and upper respiratory tract signs. On computed tomography, an expansile, osteodestructive lesion in the right tympanic bulla was identified. A soft tissue mass extended from the bulla into the nasopharynx, cranium and subcutaneous tissues. The nasopharyngeal mass ruptured during handling, liberating purulent material from which Pasteurella multocida was isolated in pure culture. The lesion was most likely an atypical, abscessated nasopharyngeal polyp. The cat was treated with bulla osteotomy and antibiotics, and made a complete recovery

Novel avulsion pattern of the left principal bronchus with involvement of the carina and caudal thoracic trachea in a cat

Philipp A Schmierer, Andrea Schwarz, Danielle A Bass and Sebastian Christoph Knell

Abstract

A 2-year-old, 4.5 kg, neutered male domestic shorthair cat was presented to the emergency service with dyspnoea, anorexia and apathetic behaviour. Thoracic radiographs showed typical signs for a thoracic trauma and a tracheal lesion in the region of the carina, consistent with pseudoairway formation. Computed tomography (CT) was performed in the conscious cat to avoid aggravation of air leakage associated with ventilation. The additional CT findings were consistent with a novel pattern of a traumatic avulsion of the left principal bronchus expanding into the carina and caudal thoracic trachea. Despite the complex avulsion pattern, successful treatment was achieved surgically by performing an end-to-end anastomosis via a fifth right intercostal lateral thoracotomy. The cat was ventilated with a feeding tube and jet ventilation throughout. The cat showed excellent recovery 6 months after surgery.

Assessment of behavioural changes in domestic cats during short-term hospitalisation

1. Gareth E Zeiler
2. Geoffrey T Fosgate
3. Elize van Vollenhoven
4. Eva Rioja

Abstract

We evaluated behavioural changes in domestic cats during short-term hospitalisation using a novel cat demeanour scoring system. Thirty-five healthy, client-owned cats admitted for neutering were enrolled. Cats were housed in a standardised cat ward for a short-term hospitalisation period (3–5 days) and demeanour scores were recorded once daily. The scoring system classified cats into one of five behavioural groupings: friendly and confident, friendly and shy, withdrawn and protective, withdrawn and aggressive, and overtly aggressive. Total demeanour score decreased over time ($P<0.001$) and the demeanour category improved ($P<0.001$). The intra-class correlation was 0.843 ($P<0.001$) and kappa was 0.606 ($P<0.001$), suggesting good repeatability and agreement among investigators. The demeanour scoring system was effective in detecting a change in behaviour in healthy cats undergoing short-term hospitalisation. The findings suggest that healthy cats require 2 days to acclimatise to hospitalisation.

Journal of Feline Medicine and Surgery

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Intravesical glycosaminoglycans for obstructive feline idiopathic cystitis: a pilot study

Allison M Bradley and Michael R Lappin

Abstract

Feline idiopathic cystitis is a common condition, often resulting in repeated episodes of life-threatening urethral obstruction. Defective urinary bladder glycosaminoglycans have been implicated as a causal factor. In this report, a commercially available glycosaminoglycan product was infused into the urinary bladders of cats with urethral obstruction from idiopathic cystitis to study the effect on repeated obstruction. In this randomized, blind, placebo-controlled clinical trial, the therapeutic protocol was well tolerated with no adverse effects. Whereas no glycosaminoglycan-treated cats (n = 9) developed repeated urethral obstruction during the 7 day follow-up period, 3/7 placebo-treated cats developed repeated obstructions. Approaching statistical significance (P = 0.06), these data suggest that further investigation of this new treatment option is warranted.

Management of bilateral ureteral trauma using ureteral stents and subsequent subcutaneous ureteral bypass devices in a cat

Elvin Kulendra, Nicola Kulendra and Zoe Halfacree

Abstract

This report describes a cat that presented with abdominal pain and worsening azotaemia following unknown trauma. Further diagnostic investigations and surgery confirmed bilateral ureteral trauma. The cat was initially managed surgically by bilateral ureteroureterostomy over ureteral stents. The clinical signs and biochemical parameters rapidly resolved, but 2 months later the cat developed signs consistent with sterile cystitis that was unresponsive to medical management. Removal of the ureteral stents resulted in severe azotaemia as a result of stricture formation at the previous ureteral anastomosis site. The ureteral stents were initially replaced with soft stents, but subsequently cut short owing to the persistence of clinical signs of cystitis. Following shortening of the ureteral stents severe azotaemia was again observed. The resulting pelvic dilatation allowed for placement of bilateral subcutaneous ureteral bypass (SUB) systems, which resulted in alleviation of all clinical signs 12 months after SUB placement.