Congestive heart failure in cats

Database: CAB Abstracts <2000 to 2013 Week 30>

Search Strategy:

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10  cats/ or cat.mp. or cats.mp. or feline.mp. [mp=abstract, title, original title, broad terms] (43665)  
11  8 and 9 and 10 (20)  
12  from 11 keep 1-14,16-20 (19)  

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Sleeper, M. M.  Roland, R.  Drobatz, K. J.
AN: 20133083641
Objective - To assess the effectiveness of the vertebral heart scale (VHS) system to differentiate congestive heart failure from other causes of dyspnea in cats. Design - Retrospective case series. Animals-67 cats with acute respiratory distress. Procedures - Medical records of client-owned cats evaluated on an emergency basis because of acute respiratory distress during a 1-year period were reviewed. For study inclusion, cats must have undergone evaluation with echocardiography and thoracic radiography within 12 hours after hospital admission. The VHS was calculated for each cat by 2 investigators. Signalment, physical examination, and echocardiographic findings were reviewed for each patient. Results - There was 83% agreement overall between the 2 investigators in assessment of cardiomegaly in cats with dyspnea ( kappa =0.49). The VHS cutoffpoints were the same for both observers in terms of optimizing sensitivity and specificity. A VHS of >8.0 vertebrae was the best cutpoint when screening for heart disease, whereas a VHS of >9.3 vertebrae was very specific for the presence of heart disease. Measurements between 8.0 and 9.3 vertebrae suggested the cause of dyspnea was equivocal (ie, secondary to congestive heart failure or respiratory disease), in which case echocardiography would be most useful in providing additional diagnostic information. Conclusions and Clinical Relevance - Results suggested that the VHS system may be a useful tool to help differentiate cardiac from noncardiac causes of respiratory distress in cats in an emergency situation when an echocardiogram is not available or is not plausible in an unstable patient.
Publisher
American Veterinary Medical Association
Location of Publisher
Schaumburg
Country of Publication
USA

Background: Congestive heart failure (CHF) in cats with left-sided heart disease is sometimes manifest as pleural effusion, in other cases as pulmonary edema. Hypothesis: Those cats with pleural effusion have more severe left atrial (LA) dysfunction than cats with pulmonary edema. Animals: 30 healthy cats, 22 cats with pleural effusion, and 12 cats with pulmonary edema. All cats were client owned. Methods: Retrospective study. Measurements of LA size and function were made using commercial software on archived echocardiograms. Cases were identified through searches of medical records and of archived echocardiograms for cats with these conditions. Results: There was no difference (P=.3) in LA size between cats with pleural effusion and cats with pulmonary edema. Cats with pleural effusion had poorer (P=.04) LA active emptying and increased (P=.006) right ventricular (RV) diameter when compared with cats with pulmonary edema and healthy cats. Cats that exhibited LA active emptying of <7.9%, total emptying of <13.6% (diameter) or <19.4% (area), or RV diameter of >3.6 mm were significantly (P<.001) more likely to manifest pleural effusion. Conclusions and Clinical Importance: Poorer LA function and increased RV dimensions are associated with pleural effusion in cats with left-sided heart disease. Publisher Wiley-Blackwell Location of Publisher Boston Country of Publication USA


Publisher BMJ Publishing Group Location of Publisher London Country of Publication UK


Hypothesis/Objectives: To describe the therapeutic use of pimobendan in cats, describe the patient population to which it was administered, document potential side effects and report the clinical course following administration of pimobendan in conjunction with standard heart failure therapy. It is hypothesized that cats with advanced heart disease including congestive heart failure from a variety of causes will tolerate pimobendan with a minimum of side effects when used in treatment in conjunction with a variety of other medications. Animals, materials and methods: One hundred and seventy client owned cats with naturally occurring heart disease, one hundred and sixty four of which had congestive heart failure. Medical records were reviewed and owners and referring veterinarians were contacted for follow-up data. Data collected included pimobendan dose, other medications administered concurrently, data collected at physical examination, presence or absence of heart failure, adverse effects, classification of heart disease, echocardiographic data and survival time. The data were analyzed for significance between the initial visit and any follow-up visits. Results: All cats were treated with pimobendan. The median pimobendan dose was 0.24 mg/kg q 12 h. Pimobendan was used in combination with multiple concurrent medications including angiotensin converting enzyme inhibitors, diuretics and anti-thrombotics. Five cats (3.0%) had potential side effects associated with
pimobendan. One cat (0.6%) had presumed side effects severe enough to discontinue pimobendan use. Median survival time for 164 cats with congestive heart failure after initiation of pimobendan was 151 days (range 1-870). Conclusion: Pimobendan appears to be well tolerated in cats with advanced heart disease when used with a variety of concurrent medications. Randomized controlled studies need to be performed to accurately assess whether it is efficacious for treatment of congestive heart failure in cats.

Publisher
Elsevier Ltd
Location of Publisher
Oxford
Country of Publication
UK

5. Signs of left heart volume overload in severely anaemic cats.
Wilson, H. E. Jasani, S. Wagner, T. B. Benigni, L. Milne, J. R. Stokes, A. L. Luis-Fuentes, V.
AN: 20113025494
Anaemia induces haemodynamic compensatory mechanisms resulting in volume overload and increased left heart dimensions in humans and dogs. The aims of this retrospective study were to investigate the effects of anaemia on echocardiographic left heart dimensions, vertebral heart size (VHS) and radiographic evidence of congestive heart failure (CHF) in cats. Fifteen cats fulfilled the inclusion criteria and were classified as mildly anaemic (haematocrit (Hct) >18-24%) or severely anaemic (Hct <=18%). Eight out of eight severely anaemic cats had left atrial enlargement compared with 1/6 mildly anaemic cats (P<0.005) and severely anaemic cats also had a larger median left ventricular end-diastolic diameter (1.80 cm versus 1.27 cm, respectively; P<0.05). No difference was found between the groups in VHS or frequency of radiographic signs of CHF. Despite the small sample size, these preliminary findings suggest that severely anaemic cats are more likely to have enlarged left heart dimensions than mildly anaemic cats.

Publisher
Elsevier Ltd
Location of Publisher
Oxford
Country of Publication
UK

Goutal, C. M. Keir, I. Kenney, S. Rush, J. E. Freeman, L. M.
AN: 20103215430
Objective - To characterize the clinical presentation, management, and in-hospital outcomes of dogs and cats diagnosed with acute congestive heart failure (CHF). Design - Retrospective study of animals seen between January 2007 and May 2008. Setting - Emergency service at a university teaching hospital. Animals - Ninety dogs and 55 cats with CHF. Measurements and Main Results - Patient characteristics, including age, clinical signs, clinicopathologic abnormalities, diagnostic testing, and outcome were recorded. Forty-eight of the animals already were receiving cardiac medications at the time of presentation. The most common diseases represented were chronic valvular disease and cardiomyopathies. Cats had significantly lower median body temperature at admission compared with dogs (P<0.001). The most common abnormalities were elevated lactate (64%), elevated BUN (52%), hypochloremia (31%), hyperglycemia (27%), and elevated liver enzymes (26%). Many of these became even more prevalent during hospitalization. One hundred and sixteen animals were discharged from the hospital, for a survival rate of 80%. There was no survival difference between dogs and cats (P=0.39). Dogs that developed hypokalemia during hospital stay (P=0.04) were more likely to survive compared with those without hypokalemia and initial body temperature was lower for those cats that did not survive (P=0.02). Of those that did not survive, the majority were euthanized (n=25), while 4 dogs died. Conclusions - Dogs and cats presented to the emergency service with CHF had a high survival rate. In cats, initial body temperature was lower for those cats that did not survive.
Although clinicopathologic abnormalities were common in both species, only dogs with hypokalemia had improved survival to hospital discharge.

Publisher
Blackwell Publishing Ltd
Location of Publisher
Oxford
Country of Publication
UK

7. Seasonal and circadian variation in presentation of cats with congestive heart failure.

AN: 20093047396
Objective - To determine if cats with congestive heart failure (CHF) are presented to a referral clinic more frequently during different seasons, months, days, or times. Design - Retrospective study. Setting - University small animal hospital. Animals - One hundred and eighty-six cats with CHF. Measurements and Main Results - The medical records of 186 cats, presented for 238 episodes of CHF between July 1, 1997 and June 30, 2002, were reviewed. An episode of CHF was defined as documented clinical evidence of pulmonary edema, pleural effusion, pericardial effusion, or ascites attributed to a cardiac origin by a board-certified cardiologist. Chi-square tests revealed statistically significant differences in presentation between different days of the week, with Thursday being the most common day, and between different hours of the day, with the peak between 10 AM to 4 PM. Evaluation of presentation for CHF by season of the year identified more cats in December, January, and February although this did not achieve statistical significance. No significant difference was identified for presentation based on the day of the month or the month of the year. Conclusions - In this population of cats, there was daily, weekly and, possibly, seasonal variation in the frequency of presentation of cats with CHF. Additional studies are warranted to confirm these findings and to determine the cause for these differences.

Publisher
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Oxford
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UK

8. Assessment of plasma cardiac troponin I concentration as a means to differentiate cardiac and noncardiac causes of dyspnea in cats.
AN: 20093001320
Objective - To determine whether plasma cardiac troponin I (cTnI) concentrations can be used to discriminate cardiac from noncardiac causes of dyspnoea in cats. Design - Prospective, multicenter study. Animals - Client-owned cats with dyspnoea attributable to congestive heart failure (D-CHF; n=31) or to noncardiac causes (D-NCC; n=12). Procedures - For each cat, plasma cTnI concentration was analysed by use of a solid-phase radial partition immunoassay; values in cats with D-CHF and D-NCC were compared. A receiver operating characteristic curve was analysed to determine the accuracy of plasma cTnI concentration for diagnosis of D-CHF. Results - Median plasma concentration of cTnI in cats with D-CHF (1.59 ng/mL; range, 0.20 to 30.24 ng/mL) was significantly higher than in cats with D-NCC (0.165 ng/mL; range, 0.01 to 1.42 ng/mL). With regard to the accuracy of plasma cTnI concentration for diagnosis of D-CHF, the area under the receiver operating characteristic curve was 0.84. At plasma concentrations >=0.2 ng/mL, cTnI had 100% sensitivity but only 58% specificity for identification of CHF as the cause of dyspnoea. At plasma concentrations >=1.43 ng/mL, cTnI had 100% specificity and 58% sensitivity for identification of CHF as the cause of dyspnoea. Conclusions and Clinical Relevance - On the basis of the derived diagnostic limits, CHF as the cause of dyspnoea could be ruled in or ruled out without additional diagnostic testing in >50% of
the study cats. Measurement of plasma cTnI concentration may be clinically useful for differentiation of cardiac from noncardiac causes of dyspnea in cats.

Publisher
American Veterinary Medical Association
Location of Publisher
Schaumburg
Country of Publication
USA

9.
Survival, complications, and analysis of risk factors after renal transplantation in cats.
Schmiedt, C. W. Holzman, G. Schwarz, T. McAnulty, J. F.
AN: 20083303002
Objective - To report survival, complications, and analyze risk factors for survival after renal transplantation (RTr) and cyclosporine-A based immunosuppression in cats. Study Design - Historical cohort. Animals - Cats (n=60). Methods - Data were obtained from medical records of cats that had RTr. Influence of various perioperative factors on survival and complications was evaluated. Occurrence of postoperative hypertension (HT), seizures, infection, acute allograft rejection (AR), congestive heart failure (CHF), and delayed graft function (DGF) was evaluated. Results - Survival to discharge after RTr was 77.5%. Estimated median overall survival time was 613 days; 6 month and 3 year overall survival proportions were 65% and 40%, respectively. Age, weight, and blood pressure influenced overall survival. Increased preoperative creatinine concentration, blood urea nitrogen, postoperative creatinine concentration, left ventricular wall thickness, and reduced creatinine reduction ratio influenced survival until discharge. HT was identified in 9/30 (30%) cats; however, no risk factors were identified, nor was HT related to seizures. AR was identified in 8/62 (13%) grafts. Infection, predominantly bacterial, developed in 22/60 (37%) cats. CHF occurred in 7/60 (12%) cats before discharge. Cats experiencing CHF were younger, had an increased incidence of heart murmurs, and poor initial graft function. DGF was identified in 5 cats and seizures in 2 cats. Conclusions - RTr affords cats with CRF long survival times. Older cats and cats with severe azotemia, HT, and cardiovascular disease may have increased mortality after RTr. Complications after RTr were common. Clinical Relevance - Clinicians should be aware of these risk factors when recommending feline RTr.
Publisher
Blackwell Publishing
Location of Publisher
Boston
Country of Publication
USA

10.
Pericardial effusion in cats: a retrospective study of clinical findings and outcome in 146 cats.
Hall, D. J. Shofer, F. Meier, C. K. Sleeper, M. M.
AN: 20073251980
Background: Pericardial effusion (PE) in dogs most often is associated with neoplasia or idiopathic pericarditis, and frequently causes cardiac tamponade. Studies of PE in the cat are limited. Hypothesis: Congestive heart failure (CHF) is the most common cause of PE in the cat. Animals: All cats diagnosed with PE on echocardiographic examination at the Matthew J. Ryan Veterinary Hospital of the University of Pennsylvania (MJR-VHUP) from 2000 to 2005. Methods: The clinical and pathologic findings in 146 cats with PE were reviewed. Records were examined retrospectively to identify additional underlying conditions. Follow-up status and cause of death were determined by review of the medical records or phone interviews with the owners. Results: The most common cause of PE in this study was CHF (75%). Biochemical abnormalities were uncommon, but aspartate aminotransferase (AST) activity frequently was increased (85%). Follow-up information was available on 108 cats (74%). Median survival time (MST) was 144 days for cats that were not euthanized within
24 hours (n=85). The MST of cats with heart failure was 41 days, whereas the MST of cats without heart failure was 361 days, when those euthanized within 24 hours were excluded. Conclusions: Survival time of cats with heart failure in this study was significantly shorter than previously reported, and significantly shorter than in cats without heart failure as a cause of PE.

Publisher
American College of Veterinary Internal Medicine
Location of Publisher
Lakewood
Country of Publication
USA

11. Dietary patterns of cats with cardiac disease.
Torin, D. S. Freeman, L. M. Rush, J. E.
AN: 20073088131
Objective - To determine nutrient intake and dietary patterns in cats with cardiac disease. Design - Prospective study. Animals - 95 cats with congenital cardiac disease or primary cardiomyopathy. Procedures - Owners completed a standardized telephone questionnaire regarding their cat's diet and a 24-hour food recall to determine daily intake of calories, fat, protein, sodium, magnesium, and potassium. Results - Of the 95 cats, 18 (19%) had a history of congestive heart failure and 73 (77%) had no clinical signs of cardiac disease. Fifty-five percent (52/95) of cats had concurrent disease. Inappetance was reported in 38% (36/95) of all cats and in 72% (68/95) of cats with a history of congestive heart failure. Most (57% [54/95]) cats received treats or table scraps on a regular basis. Approximately half the cats were receiving orally administered medications, supplements, or both. Only 34% (32/95) of owners used food to administer medications to cats. Cats consumed more than the Association of American Feed Control Officials (AAFCO) minimums for protein, sodium, potassium, and magnesium, and nearly all cats consumed more than the AAFCO minimum for fat. Daily nutrient intake was variable for all of the nutrients assessed. Conclusions and Clinical Relevance - Dietary intake in cats with cardiac disease was variable, but results for dietary supplement use, food use for medication administration, and treat feeding were different from those found in a similar study of dogs with cardiac disease. This information may be useful for treating and designing nutritional studies for cats with cardiac disease.

Publisher
American Veterinary Medical Association
Location of Publisher
Schaumburg
Country of Publication
USA

12. The effect of ramipril on left ventricular mass, myocardial fibrosis, diastolic function, and plasma neurohormones in Maine Coon cats with familial hypertrophic cardiomyopathy without heart failure.
AN: 20063208898
Background: Hypertrophic cardiomyopathy (HCM) is the most common heart disease of cats, resulting in left ventricular (LV) hypertrophy, myocardial fibrosis, and diastolic dysfunction. Hypothesis: Ramipril will reduce LV mass, improve diastolic function, and reduce myocardial fibrosis in cats with HCM without congestive heart failure (CHF). Animals: This prospective, blinded, placebo-controlled study included 26 Maine Coon and Maine Coon cross-bred cats with familial HCM but without CHF. Methods: Cats were matched for LV mass index (LVMl) and were randomized to receive ramipril (0.5 mg/kg) or placebo q24h for 1 year, with investigators blinded. Plasma brain natriuretic peptide (BNP) concentration, plasma aldosterone concentration, Doppler tissue imaging (DTI), and systolic blood pressure were measured at baseline and every 3 months for 1 year. Cardiac magnetic resonance imaging (cMRI) was performed to quantify LV mass and myocardial fibrosis by delayed enhancement (DE) cMRI at baseline and 6 and 12 months. Plasma angiotensin-converting enzyme (ACE) activity was measured on 16 cats 1 hour after PO administration. Results: Plasma ACE activity was
adequately suppressed (97%) in cats treated with ramipril. LV mass, LVMI, DTI, DE, blood pressure, plasma BNP, and plasma aldosterone were not different in cats treated with ramipril compared with placebo (P=.85, P=.94, P=.91, P=.89, P=.28, P=.18, and P=.25, respectively). Conclusion: Treatment of Maine Coon cats with HCM without CHF with ramipril did not change LV mass, improve diastolic function, alter DE, or alter plasma BNP or aldosterone concentrations in a relevant manner.

Publisher
American College of Veterinary Internal Medicine
Location of Publisher
Lakewood
Country of Publication
USA

13.
Long-term tolerance of imidapril in the cat.
Thoulon, F. Woehrle, F. Boisrame, B.
AN: 20063047367
This study was conducted to determine the long-term tolerance of imidapril HCl, a novel angiotensin-converting enzyme inhibitor (ACEi), after repeated administrations, in the cat. ACEis were the first-line treatment for congestive heart failure in small animals. They were believed to have potential protective effects on kidney, especially in cats. As they were used for chronic pathologies, their long-term tolerance had to be proven before clinical studies might be performed. To determine the chronic tolerance, 24 cats were administered 0.5, 1.5 or 5 mg/kg/day of imidapril or a placebo for 3 months. Cats were subjected to clinical examination, cardiovascular follow up (ECG and blood pressure determination), haemato-biochemistry and urinalysis. A toxicokinetic follow up was carried out, and a complete necropsy was performed at the end of the study. After 3 months of administration, no clinical, cardiovascular, haemato-biochemical and urinary adverse effects were observed. At necropsy, cats from the high dose group (5 mg/kg/day) showed a slight hypertrophy of the juxtaglomerular apparatus with increased granulation. This was considered to be a pharmacological rather than a toxic effect. No sign of toxicity was seen during this study. As preclinical data suggested that pharmacodynamic effect in the cat was obtained with a dose of 0.5 mg/kg/day, imidapril could be considered as perfectly safe for long-term administration in the cat.

Publisher
Elsevier
Location of Publisher
Amsterdam
Country of Publication
Netherlands

14.
Assessment of left atrial appendage flow velocity and its relation to spontaneous echocardiographic contrast in 89 cats with myocardial disease.
Schöber, K. E. Maerz, I.
AN: 20063040983
The hypotheses of this prospective study were that (1) left atrial appendage (LAA) blood flow velocities can be recorded in cats with myocardial disease by transthoracic Doppler echocardiography, (2) LA enlargement, LA mechanical dysfunction, and left ventricular (LV) diastolic abnormalities are associated with decreased LAA flow velocities, and (3) low LAA flow velocities predict the appearance of spontaneous echocardiographic contrast in cats with cardiomyopathy. Transthoracic 2-dimensional, M-mode, and Doppler echocardiographic studies were performed in 89 cats with hypertrophic, restrictive, dilated, or unclassified cardiomyopathy or with hyperthyroid heart disease. Maximal LAA flow velocity (LAAmax) was decreased (P<.001) in cats with cardiomyopathy (median, 0.28 m/s; range, 0.08-1.35) compared to normal cats. Associated with decreased LAA flow velocities were increased LA size, decreased LA function, increased severity of LV diastolic dysfunction, and the presence of congestive heart failure. Multivariate logistic regression analysis detected an LAAmax <0.20 m/s as the only independent variable to predict LA spontaneous echocardiographic contrast (odds ratio, 30.1; 95% confidence interval [CI], 4.1-222.3; P<.001). Receiver operating characteristic
analysis performed to predict spontaneous echocardiographic contrast indicated an area under the curve of 0.88 (95% CI, 0.80-0.95; P<.001) with sensitivities of 100 and 74% and specificities of 69 and 83% for LAAmax <0.25 and <0.20 m/s, respectively. Thus, low LAA flow velocities identified a subgroup of patients at increased risk of spontaneous echocardiographic contrast and possible thromboembolism. These findings may have important clinical implications for anticoagulation therapy and prognostication in cats with cardiomyopathy.

Publisher
American College of Veterinary Internal Medicine
Location of Publisher
Lakewood
Country of Publication
USA

15. The effects of the loop diuretics furosemide and torasemide on diuresis in dogs and cats.
Journal of Veterinary Medical Science; 2003. 65(10):1057-1061. 20 ref.
AN: 20033191138
Torasemide is a new loop diuretic that combines the effects of furosemide and spironolactone. There are no reports on the effects of torasemide in cats and dogs. This study compared the diuretic effects of furosemide and torasemide in cats and dogs. Cats with pressure overload cardiac hypertrophy were given oral placebo, torasemide 0.3 mg/kg, or furosemide 1 mg/kg or 3 mg/kg. Control and mitral regurgitation dogs were given oral placebo, torasemide 0.2 mg/kg, and furosemide 2 mg/kg for 7 days. Urine samples were obtained at baseline and 1, 2, 3, 4, 5, 6, 8, 12, and 24 hr after each drug dose. Urine volume and urine Na+ and K+ were measured. Both furosemide and torasemide increased urine volume 1 hr after administration. Furosemide caused a dose-dependent increase in urine volume that peaked at 2-3 hr in cats and dogs. The diuretic effect of furosemide disappeared 6 hr after administration, while that of torasemide peaked 2-4 hr after administration and persisted for 12 hr in cats and dogs. In MR dogs, torasemide for 7 days significantly decreased urine potassium excretion. Plasma aldosterone increased with torasemide, whereas there was no change with furosemide. In conclusion, about 1/10 concentration of torasemide was as potent as furosemide and had a longer diuretic effect in cats and dogs. These data suggest that torasemide is useful for treating congestive heart failure or oedema in cats and dogs.

Publisher
Japanese Society of Veterinary Science
Location of Publisher
Tokyo
Country of Publication
Japan

16. Retrospective study of streptokinase administration in 46 cats with arterial thromboembolism.
Moore, K. E. Morris, N. Dhupa, N. Murtaugh, R. J. Rush, J. E.
AN: 20033036606
A retrospective evaluation was performed on 46 cats with arterial thromboembolism (ATE) that were treated with streptokinase (SK). Significant heart disease was diagnosed in 45/46 cats, and 21/46 cats had congestive heart failure. Variable dosing schemes of streptokinase were administered within 1-20 hours following the onset of clinical signs (median=5.5 hours). There was no difference between survivors (S) and non-survivors (NS), based on time of administration of SK after onset of clinical signs. Twenty-five (54%) of the cats had return of pulses within 2-24 hours of treatment. Fourteen (30%) of the cats had return of motor function between 9 hours and 6 days. Fifteen of the cats (33%) were discharged from the hospital, 18 (39%) died in the hospital, and 13 (28%) cats were euthanized due to complications or poor response to treatment. Four of 5 cats (80%) with single limb dysfunction survived to hospital discharge. Life threatening hyperkalaemia was diagnosed in 16 cats (35%) after SK administration. Hyperkalaemia was more likely to occur with the longer duration of SK infusion. Eleven cats (24%) developed clinical signs of bleeding following SK administration and 3 of these cats required a blood transfusion. Laboratory testing documented coagulopathy following SK administration.
in 11 out of 17 cats tested. Hypothermia and azotemia prior to SK administration and the development of hyperkalaemia were negatively associated with survival.

Publisher
Blackwell Publishing
Location of Publisher
Oxford
Country of Publication
UK

17.
Plasma concentrations of tumor necrosis factor- alpha in cats with congestive heart failure.
Meurs, K. M. Fox, P. R. Miller, M. W. Kapadia, S. Mann, D. L.
AN: 20023084525
Objective - To determine whether plasma concentrations of tumour necrosis factor- alpha (TNF- alpha) are increased in cats with congestive heart failure (CHF) secondary to cardiomyopathy. Animals - 26 adult cats with CHF and cardiomyopathy and 9 healthy control cats. Procedure - Plasma concentrations of TNF- alpha were measured in cats with CHF and cardiomyopathy. Tumour necrosis factor- alpha was measured by quantifying cytotoxic effects of TNF- alpha on L929 murine fibrosarcoma cells. Results - Concentrations of TNF- alpha were increased (0.13 to 3.6 U/ml) in 10 of 26 cats with CHF but were undetectable in the other 16 cats with CHF and all control cats. In 20 of 26 cats with CHF, right-sided heart failure (RHF) was evident; TNF- alpha concentrations were increased in 9 of these 20 cats. The remaining 6 cats had left-sided heart failure (LHF); TNF- alpha concentrations were increased in only one of these cats. Age of cats with LHF (mean+or-SD, 12.1+or-6.2 years) was not significantly different from the age of the cohort with RHF (10.5+or-5.2 years). Body weight of cats with increased TNF- alpha concentrations (5.4+or-1.8 kg) did not differ significantly from body weight of cats with CHF that did not have measurable concentrations of TNF- alpha (4.7+or-1.6 kg). Conclusions and Clinical Relevance - Concentrations of TNF- alpha were increased in many cats with CHF. Cats with RHF were most likely to have increased TNF- alpha concentrations. Increased plasma concentrations of TNF- alpha in cats with CHF may offer insights into the pathophysiological mechanisms of heart failure and provide targets for therapeutic interventions.

Publisher
American Veterinary Medical Association
Location of Publisher
Schaumburg
Country of Publication
USA

18.
Rush, J. E. Freeman, L. M. Fenollosa, N. K. Brown, D. J.
AN: 20023031469
Objective: To determine current population characteristics of the clinical findings in cats with hypertrophic cardiomyopathy (HCM). Also, the survival times for the animals with HCM was studied. Design: Retrospective study. Animals: 260 cats with HCM. Procedure: Information was obtained from the medical records of cats, admitted at the Tufts University School of Veterinary Medicine, Massachusetts, USA, between 1990-99. Cats were classified into 1 of 4 clinical groups viz., congestive heart failure group (CHF), arterial thromboembolism group (ATE), syncope group, or cats without clinical signs (subclinical group), on the basis of the primary clinical signs at the initial examination. Results: 120 cats were classified in the CHF group, 43 in the ATE group, 10 in the syncope group, and 87 in the subclinical group. Antecedent events that may have precipitated CHF included intravenous fluid administration, anaesthesia, surgery, and recent corticosteroid administration. Median survival time was 709 days (range: 2-4418 days) for cats that survived >24 hours. Cats in the subclinical group lived longest (median survival time: 1129 days; range: 2-3778 days), followed by cats in the syncope group (654 days; range, 28-1505 days), cats in the CHF group (563 days; range, 2-4418 days), and cats in the ATE group (184 days; range, 2-2278 days). Causes of death included ATE (n=56), CHF (49), sudden death (13), and non-cardiac causes (27). In univariate
analyses, survival time was negatively correlated with left atrial size, age, right ventricular enlargement, and thoracentesis. Cats with systolic anterior motion of the mitral valve lived longer than cats without this echocardiographic finding. In multivariate analyses, only age and left atrial size remained significant predictors of survival time. Conclusions and Clinical Relevance: Although overall survival time for cats with HCM was similar to earlier reports, survival times for cats with CHF or ATE were longer than previously reported.

Publisher
American Veterinary Medical Association
Location of Publisher
Schaumburg
Country of Publication
USA

19.
Effects of benazepril in the treatment of feline hypertrophic cardiomyopathy: results of a prospective, open-label, multicenter clinical trial.
AN: 20002206500
The effects of benazepril on clinical signs and echocardiographic parameters were evaluated in cats with primary hypertrophic cardiomyopathy (HCM). 32 cats which were either asymptomatic or in stabilized congestive heart failure (ISACHC* class Ib, II or IIIa) were included in a one-year clinical trial in 5 centres in Switzerland. 28 of these cats were allocated to one of two treatment groups: standard therapy (ST) alone (9 cats), consisting of a long-acting formulation of diltiazem (6-9 mg/kg sid) and optional acetylsalicylic acid (50 mg twice weekly); or the same ST plus benazepril (0.33-0.75 mg/kg sid, 19 cats). Cats treated with benazepril showed a significant decrease (0.11+or-0.03 mm/month) in the left ventricular wall thickness from baseline, while no significant change (increase of 0.02+or-0.04 mm/month) was observed in cats on ST alone. Benazepril treated cats showed more improvement in clinical signs (20-53%) than cats receiving ST alone (0-20%) but differences between the groups were not statistically significant. No change in septal thickness or left atrial to aortic root ratio was observed in either group. It is concluded that benazepril has some beneficial effects on clinical signs and cardiac remodelling in cats with HCM and is well tolerated.