WHAT'S NEW IN FELINE MEDICINE?
Practical gems from ISFM and JFMS
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Influence of the observer’s level of experience on systolic and diastolic arterial blood pressure measurements using Doppler ultrasonography in healthy conscious cats
The objective of this study was to determine the influence of the observer’s level of experience on within- and between-day variability, and the percentage of successful systolic (SAP) and diastolic arterial blood pressure (DAP) measurements obtained by Doppler in awake cats. Only the two most skilled observers – a PhD student in cardiology and a Dipl ECVIM-Ca (cardiology) – had within- and between-day coefficients of variation (CVs) for SAP ≤16% (13–16%). Conversely, the two less experienced observers – a fifth-year student and an assistant – had high between-day CVs (61% and 73%). SAP may be assessed using Doppler in healthy awake cats with good repeatability and reproducibility by a well-trained observer.

Effect of high-dose ciclosporin on the immune response to primary and booster vaccination in immunocompetent cats
Elizabeth S Roberts, Karen A VanLare, Linda M Roycroft, and Stephen King.
The effect of ciclosporin on the ability of cats to mount an immune response following vaccination was determined. There were no differences between the ciclosporin-treated and control cats for FCV and FPV antibody titers following booster vaccination. There were delays/reductions in antibody response to FHV–1, FeLV and rabies in treated cats; however, adequate protection was achieved in response to all booster vaccinations. Following primary vaccination with FIV, control cats showed a response, but treated cats showed no antibody production suggesting that memory B-cell immune responses remain intact during repeated high-dose ciclosporin administration in cats, but that primary immune responses are impaired.

Effect of ciclosporin and methylprednisolone acetate on cats previously infected with feline herpesvirus 1
Michael R Lappin and Linda M Roycroft.
In this study, cats experimentally inoculated with FHV–1 several months previously were administered methylprednisolone acetate intramuscularly, CsA PO or a placebo. While clinical signs of activated FHV–1 occurred in some cats, disease was mild and self-limited in most cats. There was no vomiting, diarrhoea, inappetence, weight loss, polydipsia, polyuria or polyphagia recognized.

Longevity and mortality of cats attending primary care veterinary practices in England
Dan G O’Neill, David B Church, Paul D McGreevy, Peter C Thomson, and David C Brodbelt.
This study aimed to characterise longevity and mortality in cats, and to identify important demographic risk factors for compromised longevity. From 118,016 cats attending 90 practices in England, 4009 cats with confirmed deaths were randomly selected for detailed study. The most frequently attributed causes of mortality in cats of all ages were trauma (12.2%), renal disorder (12.1%), non-specific illness (11.2%), neoplasia (10.8%) and mass lesion disorders (10.2%). Overall, the median longevity was 14.0 years

A retrospective molecular study of select intestinal protozoa in healthy pet cats from Italy
Francesca Mancianti, Simona Nardoni, Linda Mugnaini, Lucia Zamberlardi, Alessandro Guerrini, Valentina Gazzola, and Roberto Amerigo Papini.
The prevalence of selected intestinal protozoa was determined by PCR using DNA previously extracted from the faeces of 146 privately owned healthy cats from Italy. PCR assays were positive in 32 (22.9%) samples. Three animals (2.0%) were positive for T foetus and Cryptosporidium, 15 (10.3%) for T gondii and 11 (7.5%) for G duodenalis. Co-infections were not observed. Typing analysis revealed Cryptosporidium felis in all cases and G duodenalis assemblages F (n = 9) and C (n = 2).
Survey of dietary and medication practices of owners of cats with chronic kidney disease
Jessica E Markovich, Lisa M Freeman, Mary A Labato, and Cailin R Heinze.
Owners of 1089 cats with CKD participated in the study. The mean reported age of the cats with CKD was 13.7 ± 4.2 years. Forty percent (430/1089) of cats had concurrent diseases, with hyperthyroidism, heart disease and inflammatory bowel disease being the most common. Many owners (466/1079; 43%) reported that their cats had an abnormal appetite; of these owners, 52% responded that their cats had a poor appetite or required coaxing to eat 5–7 days per week. Forty-seven percent and 51% of cats were receiving subcutaneous fluids and oral medications, respectively; however, most cats (811/1036; 78%) were not receiving phosphorus-binding medications. Fifty-six percent and 38% of cats received commercial cat treats and dietary supplements, respectively.

Factors affecting urine specific gravity in apparently healthy cats presenting to first opinion practice for routine evaluation
Mark Rishniw and Rodrigo Bicalho.
We measured the USG of 1040 apparently healthy cats presenting to first opinion practice in an observational study, using either in-clinic refractometers or measurements provided by reference laboratories, and examined factors that might affect USG. The USG was greater than 1.030 in 91% of cats and >1.035 in 88% of cats; 121 adult cats (≥6 months old) and five young cats (less than 6 months old) had USGs of less than 1.035. Of these 126 cats, a pathological cause was identified in 27 adult cats. No cause was identified in 43 adult cats, and further investigation was not pursued in 51 adult cats. Factors that affected USG included age, diet type, sex, fasting status, drinking avidity, refractometer type.

Associations between ‘valentine’ heart shape, atrial enlargement and cardiomyopathy in cats
Matthew D Winter, Robson F Giglio, Clifford R Berry, David J Reese, Herbert W Maisenbacher, and Jorge A Hernandez.
‘Valentine’ heart shape is a common qualifier used in veterinary radiology to describe a cardiac silhouette with focal enlargement at the level of the base of the heart in feline patients. The ‘valentine’ heart shape was associated with biatrial enlargement in 41% of the patients in our study sample that had some form of CM and just 8% of cases diagnosed with HCM, suggesting that the ‘valentine’ heart shape has a low association with HCM or biatrial enlargement; however, it should be considered a sign of feline CM.

Chronic use of maropitant for the management of vomiting and inappetence in cats with chronic kidney disease: a blinded, placebo-controlled clinical trial
21 cats received maropitant (nine Stage II cats, 12 Stage III cats) and 12 cats received placebo (seven Stage II cats, five Stage III cats). There was a statistically significant decrease in vomiting in cats with CKD that received maropitant (P <0.01). Cats that received maropitant did not have statistically significant differences in appetite scores, activity scores, weight or serum creatinine compared with placebo.

Familial cardiomyopathy in Norwegian Forest cats
Imke März, Loïs J Wilkie, Noerlene Harrington, Jessie R Payne, Ruthnea A L Muzzi, Jens Häggström, Ken Smith, and Virginia Luis Fuentes.
Norwegian Forest cats (NFCs) are often listed as a breed predisposed to cardiomyopathy, but the characteristics of cardiomyopathy in this breed have not previously been described. Gross pathology results and histopathological sections were analysed in eight NFCs, six of which had died of a cardiac cause. Myocyte hypertrophy, myofibre disarray and interstitial fibrosis typical of hypertrophic cardiomyopathy were present in 7/8 cats, but endomyocardial fibrosis suggestive of restrictive cardiomyopathy was also present in the same cats.

Routine plasma biochemistry analytes in clinically healthy cats: within-day variations and effects of a standard meal
Brice S Reynolds, Claire Brosse, Elisabeth Jeunesse, Didier Concordet, and Hervé P Lefebvre.
The objectives of this study were to assess the effects of the time of sampling and a standard meal on plasma analytes in healthy cats. Diurnal variations in tested plasma analytes in fasted cats were negligible except for urea and creatinine, which gave noticeably higher plasma concentrations in the afternoon than in the morning.
Observed postprandial variations were of some importance for phosphate and creatinine and of indisputable clinical relevance for CO2 and urea.

**Feline cutaneous mast cell tumours: a UK-based study comparing signalment and histological features with long-term outcomes**


Feline cutaneous mast cell tumours (MCTs) are the second most common skin tumour in cats. This study recorded the signalment and anatomical location from a total of 287 records from MCTs. The median age of cats presenting with MCTs was 11 years (range 5 months–19 years), with no sex or neutered status predilection. Some pedigree breeds were more susceptible to MCTs, particularly the Siamese, Burmese, Russian Blue and Ragdoll. The head was the most common site in younger cats, compared with the trunk in older cats. A new subcategory of well-differentiated MCTs with prominent multinucleated cells is described.

**Concurrent diseases in hyperthyroid cats undergoing assessment prior to radioiodine treatment**


This retrospective study examined the prevalence and type of non-renal concurrent diseases present in cats referred for radioiodine assessment that were believed to have no other comorbidities at the time of referral. Seventeen cases (18%) were identified as having concurrent disorders, with alimentary lymphoma (n = 5) and chronic enteropathy (n = 4) as the two most common comorbid diseases.

**Femoral head and neck excision in cats: medium- to long-term functional outcome in 18 cats**


Eighteen cats had undergone uni- or bilateral FHNE and met the inclusion criteria. All but one cat could perform normal feline activities without or with slight difficulty at follow-up. The majority of the cats took between 1 and 2 months to resume normal activity. No change in demeanour or behaviour was noted in any of the cats and none of the cats required long-term analgesia.

**Progestins to control feline reproduction Historical abuse of high doses and potentially safe use of low doses**


Progestins continue to be used to prevent queens from cycling, and also as an adjunct or alternative to surgical sterilization within trap–neuter–return (TNR) programs. Studies suggest that low dosages can be used relatively safely in cats, while higher dosages increase the risk and severity of adverse reactions. Early work showing that an oral MPA dosage of 0.01 mg/kg administered q24h for 12 months suppresses oestrus in queens effectively and safely.

**Spontaneous gastrointestinal perforation in cats: a retrospective study of 13 cases**


Thirteen cats were included. Five of these cats had concurrent illnesses, including viral upper respiratory tract disease, pancreatitis and chronic kidney disease. Two cats had previously received non-steroidal anti-inflammatory drugs and four had received corticosteroids. Clinical signs and clinicopathological abnormalities were not specific. Histopathological examination of the ulcerated wall was performed in 11/13 cats. Alimentary lymphoma was diagnosed in six cats. Non-neoplastic lesions (lymphocytic–plasmacytic inflammatory bowel disease, necrotic suppurative enteritis) were observed in the other five cats.

**Absence of bacterial DNA in culture- negative urine from cats with and without lower urinary tract disease**


The study sample included 38 culture-negative urine samples from cats with FLUTD and 43 culture-negative samples from control cats. Occurrence of bacterial DNA in culture-negative urine from cats with or without signs of lower urinary tract disease was not demonstrated.