Oral presentations

What can sway SDMA? A retrospective analysis of the influence of renal and non-renal factors on symmetric dimethylarginine (SDMA) concentration in cats and dogs

**Peter Coss¹, Marta Costa²,
Sophie Adamantos², Natalie Finch³**

- 1 Bristol Veterinary School, University of Bristol, Bristol, United Kingdom
- 2 Langford Vets, University of Bristol, Bristol, United Kingdom
- 3 Bristol Renal, University of Bristol, Bristol, United Kingdom

OBJECTIVES

To explore the influence of renal and non-renal factors on symmetric dimethylarginine (SDMA) concentration in cats and dogs.

METHODS

Clinical data from patients presenting to a University referral hospital, between April 2016 and August 2017

in which SDMA was measured, was retrospectively analysed. Renal disease was based on clinical findings (physical examination, biochemistry, urinalysis and imaging). Increased SDMA was defined as the upper limit of the laboratory reference interval (14 µg/dl). Proportions of patients with increased SDMA were compared between renal and non-renal disease groups using Chi-squared testing. In renal patients, SDMA was compared between categorised variables using the T test and a multivariable linear regression model was constructed to identify independent predictors of SDMA.

RESULTS

Twenty-one cats and 12 dogs were included. There was no significant difference in the proportion of patients with increased SDMA between those with (13/21, 62%) and without (5/12, 42%) renal disease ($P=0.300$). Only 4/11 (36%) IRIS stage 1 patients had increased SDMA compared to 8/9 (89%) IRIS stage 2 patients and 1/1 (100%) with acute kidney injury. Patients with weight loss had significantly lower SDMA than patients without ($P=0.031$). In the multivariable regression model, creatinine was a positive ($\beta=0.413$, $P=0.038$) and history of weight loss a negative ($\beta=-0.434$, $P=0.030$) predictor of SDMA (model R^2 0.392). These were independent of signalment, weight, condition score and other disease factors.

STATEMENT (CONCLUSIONS)

This study suggests that many IRIS stage 1 patients do not have increased SDMA and that weight loss has a negative influence on SDMA.

The prevalence of radiographic evidence of urolithiasis in cats presented to a veterinary hospital

**Andrea Galliano^{1,2}, Gawain Hammond²,
Alix McBrearty², Anna Beber²,
Gerard McLauchlan¹**

- 1 Fitzpatrick Referral Soft Tissue and Oncology, Guildford, United Kingdom
- 2 Glasgow University, Glasgow, United Kingdom

OBJECTIVES

To determine the prevalence and location of mineralised radiopacities within the urinary tract of a population of cats.

METHODS

All cats presented between 2011 and 2015 with at least one diagnostic abdominal radiograph of the entire urinary tract were eligible for inclusion. Fourteen cases in which the only available radiographs showed urinary catheters, stents or subcutaneous ureteral bypass devices were excluded. Radiographs were reviewed by one specialist in diagnostic imaging for mineralized opacities (uroliths) within the urinary tract. Their number, location and size were recorded. Presenting signs and serum calcium results of cats with uroliths were also reviewed.

RESULTS

Two hundred and four cats were included.

Thirty seven cats (18%) had at least one urolith. Thirteen cats had one urolith, 9 had two to five and 15 had more than five. Uroliths were identified in multiple locations in 15 cats. Nephroliths were identified in 19 cats, ureteroliths in 9, cystoliths in 19 and urethral calculi in 4. The uroliths were <1 mm in 10 cats, between 1 and 2 mm in 20 cats and >3 mm in 7 cats.