and infectious causes ($p < 0.001$), with owned cats more likely to have a cardiac cause, and stray cats more likely to have traumatic or infectious causes.

Older cats (>10 y) were positively associated with neoplastic cause ($p < 0.01$). Younger cats (<3 y) were positively associated with infectious cause ($p < 0.001$). Breathing patterns did not allow cause identification in most cases, but did indicate the presence or absence of fluid or air in the pleural cavity ($p < 0.001$). Sex showed no association to any cause.

DISCUSSION AND CONCLUSIONS

Causes of acute dyspnoea were markedly different in owned and stray populations in this study, and may be due to the divergent lifestyles, life expectancy, and propensity to disease and trauma in the different populations. The prevalence of different causes of acute dyspnoea in owned cats was manifestly different to previous referral population studies. Age of the cat and breathing pattern at presentation may assist clinicians in diagnosis and therapy.

An evaluation of the shock index in cats with hypoperfusion; a novel, pilot study

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INTRODUCTION

Identification of shock in cats can be challenging. The Shock Index (SI) has been evaluated in human and canine emergency medicine and found to be a useful index for identification of shock. It is calculated as the heart rate/systolic blood pressure. Studies in dogs have shown that a value of ≥ 0.9 maximises the sensitivity and specificity when combined with clinical signs for identifying shock. To the authors' knowledge the SI has not been previously evaluated in cats.

OBJECTIVES

To define the SI value in cats, and compare this value between cats presenting with and without clinical signs of hypoperfusion.

METHODS

Cats presenting as emergencies between January 2014 and July 2015 were identified retrospectively. Cats with insufficient recorded data to identify hypoperfusion, or did not include heart rate and systolic blood pressure on presentation were

excluded. Cats were divided into a hypoperfused and control group based on clinicopathological findings and clinician diagnosis. Age, body weight, heart rate and systolic blood pressure were analysed using Independent Sample T-tests. An Independent Kruskal-Wallis test was used to compare the SI between the groups. The SI was calculated for each cat and a receiver operating characteristics curve was used to determine the area under the curve to identify the optimum cut off value for maximising sensitivity and specificity of the SI. This SI value was then applied prospectively to 10 cats presenting emergently between July and October 2015.

RESULTS

Sixty-three cats (16 hypoperfused and 47 controls) met the inclusion criteria. Age, body weight and heart rate did not differ between the groups. Systolic blood pressure was lower (<0.001) and SI higher (<0.001) in the hypoperfused group. The optimum SI for identifying hypoperfusion was identified as ≥ 1.6 with a sensitivity/specificity of 75% and 86% respectively. When this was applied to the prospective group 75% of cats presenting with clinical signs indicating hypoperfusion had a SI ≥ 1.6 . Overall a SI ≥ 1.6 was associated with higher mortality.

CONCLUSIONS

The SI is a rapid, simple, ancillary tool and when combined with clinical findings can aid in identifying most cats presenting with hypoperfusion. A SI ≥ 1.6 is suggested as a cut off value for identification of hypoperfusion and warrants prospective investigation. In this population a SI ≥ 1.6 was associated with higher mortality.

Cytological analysis of abdominal fluid in canine gastric perforation: a retrospective case series

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INTRODUCTION

Identification of gastrointestinal perforation is important as urgent surgery is often indicated. Cytological evaluation of

abdominal fluid can be used to rapidly identify the presence of a septic abdomen. Gastric rupture may not always be associated with bacterial contamination of the abdomen and therefore typical features of sepsis may not be prominent. Accurate and rapid diagnosis of gastrointestinal rupture is important in pursuing a successful outcome.

OBJECTIVE

To describe the cytological analysis of abdominal fluid from dogs with confirmed gastric perforation.

METHODS

Medical records of dogs with surgically confirmed gastric