



RETROSPECTIVE EVALUATION OF THE CLINICAL CHARACTERISTICS OF AORTIC THROMBO-EMBOLISM IN 29 CATS IN AN EUROPEAN REFERRAL POPULATION.



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Introduction

The risk for developing thrombotic disease is most likely multifactorial but has been classified under the three arms of the triade of Virchow: vascular stasis, endothelial injury and hypercoagulability. Cats seem to be relatively prone to thrombo-embolic disease compared to dogs, and it is very often associated with underlying cardiac disease. Feline aortic thrombo-embolism (FATE) is a very painful condition and early recognition and treatment might improve survival.

Objectives

Aims of the study were to describe the clinical characteristics of FATE and its underlying conditions in view of better recognition of the disease.

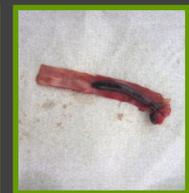


Material and methods

The case records of all cats diagnosed with FATE at one European (case recruitment from Benelux and UK) referral practice (Animal CardioPulmonary Consultancy) by one Specialist™ were selected for retrospective analysis. Diagnosis was based on physical examination, thoracic radiography, electrocardiography when deemed necessary, Doppler echocardiography, blood work, urinalysis and vascular Doppler studies.

Results

There were 7 breeds represented with DSH (51%), Maine Coon (17%) and Persians (17%) being the most common. There were 21 males (20 Mc) and 8 females (5Fn). The mean and median age was 7 y (range 7m-21y). The mean weight was 4.6 kg (range 2.5-5.75 kg).



Physical examination revealed a HR < 140 BPM in 10 % and a HR > 180 BPM in 28% of the cats. Murmurs were present in only 44 % of the cats but gallops in 80 % of the cats. Dyspnoea was present in 15/29 cats.

The localization of the thrombus was confirmed by clinical and by vascular Doppler assessment. Complete distal aorta 'saddle' embolism was confirmed in 45 % of the cats, all the others exhibiting partial thrombosis: the brachial artery appeared occluded in 6/29 cats (right front leg 5/29 ; left front leg: 1/29), the femoral artery in 9/29 cats (right hind leg 4/29; left hind leg: 5/29) and one cat exhibited mesenteric artery TE.



Electrocardiography showed that 2 cats(7%) were in atrial fibrillation.

Echocardiographic data were available in all animals. Colour Doppler echocardiography confirmed the presence of cardiac pathology in 28/29 (97%) of the cats. Most cats had HCM (71%) or RCM (18%), the remainder were diagnosed with congenital heart disease (1 mitral dysplasia and 1 cor triatriatum sinister) and one with trauma (perforating bullet and pericardial haemorrhage). Left atrial size was equivalent to or exceeded 20 mm in 52% of the cats.

Eighteen cats had radiographic/ultrasonographic evidence of congestive heart failure (64%). Concurrent non cardiac pathologies consisted of asthma (n=1), chronic cholangiohepatitis (n=1), lymphoplasmacytic stomatitis (n=1) and chronic kidney disease (n=1). One cat had a protein losing enteropathy and no cardiac disease.

Despite anti-coagulation (drugs used alone or together: aspirin, clopidogrel, deltaparin, fondaparinux) at least 22/29 cats exhibited recurrence (13 once, 7 twice, 2 three times; all but one within less than 1 year). Congestive heart failure was controlled with furosemide and ACEI therapy, and occasionally with addition of pimobendan.

Conclusion

This study complies overall with the findings in the literature but accentuates the prevalence of partial limb thrombosis and the absence of atrial enlargement in half of the cats despite the presence of underlying cardiac disease in 97 % of them. Maine Coons did not seem to be spared of the disease and this in contrast with general thoughts. Despite multiple treatment options being available (mono- and polypharmacotherapy) FATE remains a devastating disease with a high morbidity and recurrence rate despite clinical characterisation and management of the underlying disease.