

USE OF CONTRAST ENHANCED CT IN FELINE AORTIC THROMBOEMBOLISM: A CASE REPORT OF A 2-YEAR-OLD BRITISH SHORTHAIRED CAT

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Abstract: *Feline aortic thromboembolism (FATE) is a syndrome that occurs secondary to embolization of thrombi of cardiac origin with any possible localization, although the aortic bifurcation is the most commonly affected site. The most common causes that lead to FATE are hypertrophic cardiomyopathy (HCM) and unclassified cardiomyopathy (UCM); dilated cardiomyopathy (DCM) rarely leads to this syndrome. Certain cat breeds - the British shorthair included - are at risk for developing FATE due to predisposition to these cardiac conditions. Presentation is usually acute with some of the most common complaints being sudden collapse, hemiparesis/paresis and vocalizing due to severe pain. Coexisting cardiac conditions are frequently present. Diagnostic tools vary, although findings on physical examination and history are usually suggestive; imaging studies may be useful in some cases. The patient presented here had signs specific for a saddle thrombus. Severe HCM and dilation of the left atrium were diagnosed using echocardiography. CECT (contrast enhanced computed tomography) was useful in localizing the thrombus, due to its uncommon localization. Taking into account the severity of this condition, high probability of recurrence, prolonged and partial recovery, owners elected euthanasia.*

Keywords: FATE, British shorthair, echocardiography, contrast enhanced CT.

•Introduction

FATE is clinical syndrome caused by embolization of cardiac thrombi, with aortoiliac bifurcation being the most common localization, even though embolization can occur in any part of the vascular system, with the result being ischemic necrosis of the affected organs/tissues. HCM is one of the most common causes leading to thromboembolism. Cardiac disease, as well as intracardiac thrombi, may be confirmed by use of echocardiography. Ultrasonography – color-flow Doppler – may help in identifying the thrombus or lack of blood flow. Contrast angiography can reveal occlusion of blood vessels, but is not recommended. Recurrence of FATE is common, with following episodes proving to be fatal. Euthanasia performed at presentation is common.

•Material and method

The patient - a 2-year-old indoor male British shorthair cat - was examined in the Faculty of Veterinary Medicine from Timișoara, in several clinics. A radiographic study, echocardiography, EKG, and CECT were performed.

•Results and discussions

The clinical signs with which the patient presented consisted of severe tachypnea (over 70 bpm), dyspnea, open-mouth breathing, paraplegia and cyanotic foot pads of hind limbs (Fig. 1).



Fig. 1. Clinical presentation.

The main radiological findings consisted of severely enlarged cardiac silhouette (VHS was 8.9v) and pulmonary edema. EKG and echocardiography revealed HCM (Fig. 2).



Fig. 2. EKG (left) and echocardiography (right) revealing severe HCM.

CECT (MPR and VRT) was useful in determining the exact location of the thrombotic area, by observing exactly where the contrast medium filled abdominal aorta was occluded by an elongated, irregular, intraluminal mass. VRT is also helpful in creating a three-dimensional view of the patient's vasculature revealing the exact location of the thrombus and may help with planning surgery, should it be considered (Fig. 3).

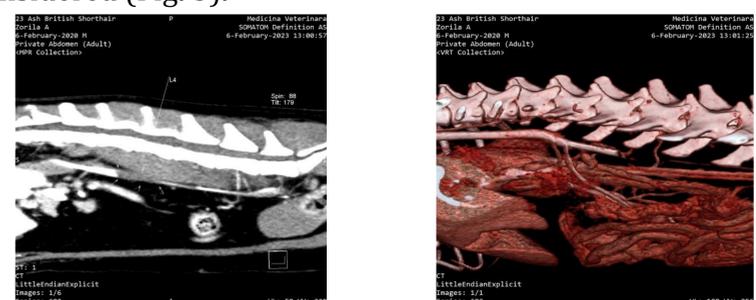


Fig. 3. MPR (left) and VRT (right) at the level of the abdominal aorta revealing the localization of thrombus.

• Conclusions

FATE is an acute condition, often caused by severe underlying cardiac disease, with euthanasia being commonly pursued.

If surgery is planned, CECT may be used to identify the exact location of the thrombus.

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