Oral presentations

Thoracic computed tomography findings in dogs naturally infected with *angiostrongylus vasorum*

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BACKGROUND

Angiostrongylus vasorum (*A. vasorum*) is an important emerging disease of wild and domestic canidae. Cardiorespiratory signs due to parasitic pneumonia are a common clinical manifestation in many infected patients, and as such thoracic imaging is critical in diagnosing and monitoring disease progression or resolution. Although computed tomography (CT) is now widely available in the United Kingdom (UK), currently there is no description of the thoracic CT appearance of parasitic pneumonia caused by natural infection with *A. vasorum* in dogs.

AIMS

To review clinical data and findings from thoracic CT in dogs naturally infected with *A. vasorum* and to identify any consistent changes that may aid in diagnosis, management and prognostication.

METHODS

Nine UK referral centre's clinical and imaging databases

were searched using keywords for cases which would fulfil the following criteria:

1. Confirmed diagnosis of *Angiostrongylus vasorum*
2. Complete clinical notes with owners' permission
3. Thoracic CT scan of diagnostic quality within 14-days of diagnosis
4. Absence of significant concurrent disease

Any dogs identified had a retrospective analysis of clinical records and thoracic CT sequences. All CT sequences were acquired using a helical CT unit under general anaesthesia or sedation using a similar protocol in each centre. A single board certified specialist reviewed all imaging findings.

RESULTS

Six out of nine centres had cases that fulfilled the inclusion criteria; eighteen dogs were included in the study. All cases had multiple lung lobes affected bilaterally. The right cranial, caudal, accessory and left caudal lobes were affected in all animals. The right middle and left cranial lobes were affected in the majority of cases (n=16). The predominant abnormality was an alveolar and interstitial lung pattern in peripheral lung lobes, increased lung opacity with alveolar and interstitial pattern within the pleural and subpleural regions, resulting in a clear delineation between the subpleural and peribronchial zones.

CONCLUSION

This study is the first to provide information about the thoracic CT findings in dogs naturally infected with *A. vasorum*. The finding on CT of alveolar and interstitial lesions in peripheral lung lobes is suggestive of pneumonia secondary to *A. vasorum*, with or without cardiorespiratory signs. CT can contribute valuable information, which can localise pulmonary changes and characterise intra-thoracic pathology associated with *A. vasorum*. Further studies to compare the results of thoracic radiography to CT would be useful.

Molecular detection of vector-borne pathogens in blood and spleen samples from dogs undergoing splenectomy

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This retrospective study aimed to evaluate certain Vector-Borne Pathogens (VBP) in samples from dogs presenting splenic lesions.

Stored EDTA-blood and surgically obtained spleen samples were analyzed. *Leishmania infantum*, *Ehrlichia/Anaplasma* spp., *Hepatozoon canis*, *Babesia* spp., *Theileria annae*, *Rickettsia* spp., *Bartonella* spp. and *Mycoplasma* spp. were targeted using PCR assays. Dogs without evidence of splenic abnormalities under imaging assessment were included in the control group. Medical records of all the dogs were reviewed.

Fifty-seven EDTA-blood and 49 spleen samples from 58 splenectomized dogs and 60 EDTA-blood samples from control dogs were analyzed. Histopathology was performed in 49 cases. The 57.1% of the biopsies (28/49) were consistent with benign lesions and 42.9% (21/49) with malignancy [mostly hemangiosarcoma (17/21)]. Clinical data reflected that 8 dogs had been previously diagnosed with IBD; splenic lesions were detected in the 87.5% [most of them benign processes (6/7)].

PCR yielded positive results in 12 cases (20.7%):