



### O-13. CLINICAL AND RADIOLOGICAL FINDINGS IN CATS NATURALLY AFFECTED BY HEARTWORM ASSOCIATED RESPIRATORY DISEASE.

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The clinical and radiological findings observed in feline heartworm disease can be very similar to other respiratory pathologies, such as feline asthma or chronic bronchitis. This, added to the difficulty in establishing a clinical diagnosis, means that on many occasions the definitive diagnosis is not reached. Nowadays, only one previous study is known to assess the clinical course and radiological findings of asymptomatic cats naturally infected by *Dirofilaria immitis*. The objective of this study was to assess the symptoms, immunological tests and the presence of radiological findings observed in cats naturally infected by immature larvae of *D. immitis*. Twenty cats diagnosed with Heartworm Associated Respiratory Disease (HARD) through the indirect ELISA technique for the detection of *D. immitis* antibodies (in-house ELISA, Urano Vet®, Barcelona, Spain) were included. These animals were studied between January and July 2022 at the Veterinary Clinical Hospital of University of Las Palmas de Gran Canaria (Gran Canaria, Spain). Data on age, breed, sex, habitat and presence of symptoms were collected. Furthermore, the rapid test for the detection of antigens against leukemia (FeLV) and feline immunodeficiency antibodies (FIV) was carried out (Urano Vet®, Barcelona, Spain). Subsequently, thoracic radiographs with two projections (latero-lateral, and ventro-dorsal) were carried out in all the cats studied. The cardiac silhouette was assessed through Vertebral Heart Score (cut off >7.8). Moreover, the pulmonary pattern, pulmonary opacity, and the distribution of pulmonary lesions were evaluated. The most common clinical signs were those of respiratory origin, with 16 cats (80%) presenting for cough and/or dyspnea. Meanwhile, 2/20 (10%) had gastrointestinal symptoms (diarrhea). Finally, 2/20 (10%) had no symptoms. In immunological tests, 10% of cats were positive for FeLV and 5% of cats were positive for FIV. Through VHS it was observed that 15% cats showed an increase in the size of the cardiac silhouette. Lung appearance was variable in all animals studied. Abnormalities of the pulmonary arteries were observed in 20%. The most common pulmonary findings were broncho-interstitial (80%), interstitial (15%), and alveolar (5%). 10% cats showed no abnormalities in the lung parenchyma. No cat showed pleural effusion. Pulmonary lesions were mainly observed with a diffuse and bilateral distribution pattern, affecting the caudal lobes with greater severity. The results of this study show that the combination of clinical findings and radiological study is quite useful to suspect HARD in endemic areas, thus emphasizing the importance of including this disease in the differential diagnosis. Despite the absence of a significant correlation in the presence of FeLV-FIV coinfections with feline dirofilariosis, it is proposed to continue assessing it with a greater number of samples, taking into account, above all, cats that live outdoors.

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#### References

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