

O 12 - Cardiopulmonary biomarkers in dogs infected by *Dirofilaria immitis*.

Carretón E.^a, Corbera J. A.^a, Juste M. C.^a, Morchón R.^b, Montoya J. A.^a

^aMedicina interna, Facultad de Veterinaria, Universidad de Las Palmas de Gran Canaria, 35307- Arucas (Las Palmas), Spain. ^bLaboratorio de Parasitología, Facultad de Farmacia, Universidad de Salamanca, Avda. Del Campo Charro s/n, 37007 Salamanca, Spain.

Dirofilaria immitis produces relevant injuries in different organs, principally at cardiovascular and pulmonary systems. Cardiopulmonary biomarkers are biological parameters that can be objectively measured and quantified as indicators of pathogenic processes (heartworm disease), or responses to a therapeutic intervention. Biomarkers are typically thought of as tools for screening, diagnosing, or monitoring of a disease process, but they may also be used to determine disease susceptibility and eligibility for specific therapies. The aim of the present study was determined the levels of cardiopulmonary biomarkers (cardiac troponin T, mioglobin and D-dimer) in dogs parasitized by *D. immitis*. Sixty two dogs were analyzed: 9 healthy animals (control group), 10 seropositive and amicrofilaremic dogs and 43 microfilaremic and seropositive dogs. The measurement of circulating cardiopulmonary biomarkers concentration was performed in heparinized blood using specific troponin T, myoglobin and D-dimer immunoassay system, (Cardiac Reader ® Roche Diagnostics) following manufacturer instructions. In all groups of dogs troponin T values were below the detection limit of the equipment (<0.03 ng/ml). The control group and the amicrofilaremic dogs group were myoglobin values <30 ng/ml, In the microfilaremic group a 23.26% of dogs had higher values of myoglobin (100 ng/ml). The control group presented levels of D-dimer <0.1 mg/ml. The 50% of the amicrofilaremic dogs showed detectable values of D-dimer between 0.1 and 0.5 mg/ml, not considered pathological, and 10% of dogs of this group had pathological levels of D-dimer. In the microfilaremic dogs group 27.9% had pathological values of D-dimer higher than 0.5 mg/ml. In conclusion our results suggest that in dogs infected with *D. immitis* biomarkers of pulmonary thromboembolism (D-dimer) were elevated, especially in microfilaremic dogs. In this group myoglobin concentration are also abnormally elevated.

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**PROGRAMME
AND ABSTRACTS**

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