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oral presentations

HOMOCYSTEINE CONCENTRATION IN SERUM OF DOGS NATURALLY INFECTED WITH *BABESIA CANIS*

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Background: Lower homocysteine (Hcy) concentration was noticed in dogs with systemic inflammatory response syndrome of various aetiology, in comparison with healthy dogs. **Objective.** The study had two objectives: to compare Hcy concentrations in serum between dogs naturally infected with *Babesia canis* and healthy dogs; to assess the relationship between Hcy concentration and the results of the routine laboratory tests. **Materials and methods.** The study enrolled twelve dogs infected with *B. canis* (BAB) and six healthy dogs (HD). The commercial immunoassay, spectrophotometry, and haematology kits were used. Statistical analyses included the Mann-Whitney U test and Spearman's rank correlation analysis. **Results:** BAB had lower concentrations of Hcy than HD ($p=0.045$). When analysing the results from all studied dogs together, Hcy had a positive correlation with erythrocyte count ($r=0.771$; $p=0.001$), haemoglobin concentration ($r=0.696$; $p=0.004$), haematocrit ($r=0.664$; $p=0.007$), leukocyte count ($r=0.554$; $p=0.032$), and total protein concentration ($r=0.689$; $p=0.004$), and a negative with glycaemia ($r=-0.693$; $p=0.004$). **Conclusion:** The obtained results provide preliminary evidence about the association between acute canine babesiosis and lowered Hcy concentration in blood. Further studies will decipher whether this finding has clinical applicability or represents just an APR epiphenomenon.



oral presentations

THE INDIRECT ANTIGLOBULIN (COOMBS') TEST IS SPECIFIC BUT INSENSITIVE COMPARED TO THE DIRECT ANTIGLOBULIN TEST IN DOGS

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Background: The immunodiagnostic assessment of dogs suspected to have immune-mediated hemolytic anemia (IMHA) is controversial^{1,2}. We demonstrated the value of the direct antiglobulin test (DAT)³⁻⁵, but little is known about the indirect antiglobulin test (IAT). **Objectives:** To evaluate IAT techniques for detection of erythrocytic autoantibodies in serum from dogs with known DAT Results: **Methods.** Leftover serum samples were incubated with DAT- erythrocytes, and five IAT techniques were performed (with different reagents and temperatures): microtiter plate (MICRO), microcapillary, gel column, minigel tube (GEL) kit and immunochromatographic strip kit. **Results:** All 44 DAT- dogs had IAT- results with rare exceptions. With one MICRO IAT, 55% of the 44 DAT+ samples were also IAT+ ($\kappa=0.51$). The GEL kit recognized 52% ($\kappa=0.48$) of DAT+ samples, while only 11-30% were IAT+ with other methods. Differences between antiglobulins and temperatures used were observed, and the degree of IAT positivity was less strong compared to DAT values. While the specificity of IAT was high (>90%), the sensitivity was low. **Conclusion:** In this large cohort evaluated with five IAT methods, two IAT techniques detect autoantibodies against erythrocytes in serum from approximately half of the DAT+ dogs. Moderate correlation was observed between the MICRO DAT and IAT with MICRO and GEL kit. The autoantibodies may be all bound to erythrocytes and thus not present in serum, or the conditions for IAT methods were not optimal. While the DAT is recommended, the IAT may be helpful when only serum is available and the IAT is positive in the approach to diagnose IMHA in dogs.