Difference of eccentrocyte numbers between healthy Greyhounds and non-sighthound breeds. An observational study

Daniela Grigore¹, Rachel Miller¹, Jenny Walton², Simon Tappin¹, Paola Monti¹

¹ Dick White Referrals, Six Mile Bottom, United Kingdom
² Pet Blood Bank, Loughborough, United Kingdom

OBJECTIVES

Haematological differences between Greyhounds and non-sighthound breeds are well documented in the veterinary literature including higher haematocrit, haemoglobin concentration, erythrocyte count and MCV/MCHC values. It is the author's clinical observation that eccentrocyte numbers are higher in healthy Greyhounds compared to other breeds. This study aims to assess whether healthy Greyhounds have increased eccentrocyte numbers compared to non-Greyhound breeds.

METHODS

A prospective blinded study was conducted evaluating 45 healthy dogs. Twenty-five dogs were Greyhounds and 20 non-sighthound breeds were used as a control population. Dogs were eligible for the study if the history, clinical examination, haematology (with the exception of eccentrocyte count) and biochemistry were unremarkable. Fresh blood smears were reviewed for each dog by a board certified clinical pathologist and the number of eccentrocytes per 10 high power fields (hpf) recorded. Samples were excluded if significant blood smear abnormalities were present (acantocytosis, schistocytosis, polychromasia) (n=5). Data was analysed with D'Agostino and Pearson test to assess normality of distribution and a Mann-Whitney U test to evaluate differences in eccentrocyte numbers between the two groups. $P < 0.05$ was considered statistically significant.

RESULTS

The Greyhound and control group were comparable with respect to age, sex and neuter status. Median eccentrocyte numbers were significantly higher in Greyhounds (median 6/10 hpf; range 1–22) compared to non-sighthound controls (median 1/10hpf; range 0–6) ($P < 0.0001$).

STATEMENT (CONCLUSIONS)

This study is the first to describe increased eccentrocyte numbers in healthy Greyhounds as a normal variation for this breed. The clinical significance of this findings still needs to be elucidated.

Evaluation of immunosuppressive regimens in the treatment of canine idiopathic immune-mediated polyarthritis (IMPA)

Andre Kortum, Barbara Skelly, Tim Williams

University of Cambridge, Cambridge, United Kingdom

OBJECTIVES

IMPA is a commonly diagnosed disorder, however little evidence is available to facilitate decision-making regarding optimal treatment. This study compared clinical response, incidence of relapse and cumulative prednisolone exposure in dogs treated with prednisolone

monotherapy (group PM) and multimodal immunosuppressant therapy (group MIT).

METHODS

Medical records (2006–2017) of dogs diagnosed with idiopathic IMPA were reviewed. Dogs were classified according to treatment regimen initiated following diagnosis. Treatment response, incidence and time to relapse of clinical signs, and prednisolone exposure over six months following diagnosis (calculated from the area under the curve[AUC] of prednisolone dose[mg/kg] against time[months]) were evaluated.

RESULTS

There were 22 dogs in group PM and 8 dogs in group MIT. Response to treatment was not different between groups (PM: complete in 14/22, partial in 8/22; MIT: complete in 3/8, partial in 5/8 [$P = 0.242$]). Incidence of relapse was greater (PM 11/22, MIT 7/8, $P = 0.02$) and median time to relapse was shorter (PM 919d, MIT 202d; $P = 0.013$) in group MIT than group PM. Prednisolone exposure tended to be higher in group MIT (median [IQR] AUC 4.5 [3.1–6.5]) than in group PM (AUC 3.2 [2.8–4.0]; $P = 0.054$).