STATEMENT (CONCLUSIONS)

Dogs started on multimodal immunosuppressant therapy had an increased incidence and shorter time to relapse and a tendency towards greater cumulative prednisolone exposure compared to those receiving

prednisolone alone. This may suggest an advantage to prednisolone monotherapy or alternatively reflect an increased tendency for use of adjunctive immunosuppressants in severe or refractory cases. Further prospective randomized studies are therefore required to validate these findings.

Ligament laxity in non-erosive immune mediated polyarthritis (IMPA) in dogs (2009–2017)

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OBJECTIVES

To identify the incidence of carpal and tarsal ligament laxity in cases of non-erosive IMPA in dogs and to describe the clinical features of these cases.

METHODS

A single centre retrospective study in a referral population. Cases of non-erosive IMPA with ligament laxity were

identified by review of hospital records. Primary care practices were contacted to attain follow up in cases in which ligament laxity was identified. Data were descriptively analysed.

RESULTS

77 cases of non-erosive IMPA were identified. Of these 61 were type I, 10 type II and 6 type III. Four dogs were identified with carpal or tarsal ligament laxity.

Three dogs were female (2 neutered), and one male entire. A mixture of breeds were identified, one each of shar pei, Fell terrier, border collie and papillon. A range of body weights was identified (2.95 kg–19.5 kg). Three of these dogs were classified as type I IMPA and one type III. Affected joints were carpi and tarsi (n=3), carpi (n=1). None of the dogs were receiving anti-inflammatory or immunosuppressive doses of corticosteroids at the time of onset of ligament laxity. In 2 cases surgical intervention was required to address the ligament laxity (carpal and tarsal arthrodesis n=1, bilateral carpal arthrodesis n=1).

STATEMENT (CONCLUSIONS)

Ligament laxity has not been previously described in dogs with non-erosive IMPA. This suggests that damage to the soft tissue structures can occur in both erosive and non-erosive IMPA.

The use of a standard operating procedure in the analysis of canine packed cell volume

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OBJECTIVES

To evaluate whether the use of a standard operating procedure (SOP) reduces inter- and intraoperator variation,

and improves accuracy, in the measurement of the canine packed cell volume (PCV).

METHODS

An illustrated SOP was created, in a step-by-step approach. Aliquots of blood was prepared from surplus blood. The PCV of several aliquots were measured by the authors following World Health Organisation (WHO) guidelines.

Clinical staff and undergraduate veterinary students were randomly assigned to two groups; those with, and those without access to the SOP.

The participants were then instructed to perform a PCV measurement as they would on clinics, with or without the SOP.

The participants were required to record their measured PCV, which was then compared to that measured by one of the authors (CB or JPAS).

If the participant and author's were in agreement, but did not patch the reference values, this was deemed a mixing error. If the participant and author's values did not

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agree, but the author's value matched the reference, this was deemed a reading error.

RESULTS

Nine participants had errors attributed to inadequate mixing. One with and eight without the SOP ($p=0.069$).

Ten participants had errors attributed to incorrect reading. One with the SOP and nine without ($p=0.035$).

95% of the results were within 0.0125 l/l and 0.09 l/l in those with and without the SOP.

STATEMENT (CONCLUSIONS)

This study confirms that a standard operating procedure reduces the operator variation with this technique and improves the accuracy of the obtained results.

Use of a pet blood donation by-product in canine immunology research

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OBJECTIVES

Dendritic cells are professional antigen presenting cells, which are used *in vitro* to investigate the early stages of cell-mediated immunity. The potential role of dendritic cells for immunotherapy, particularly in the context of stimulating anti-tumour immunity, has led to several studies which have generated these cells from blood-derived monocytes. Advances in veterinary transfusion medicine have enabled the establishment of canine blood donation clinics, which routinely collect and store

blood from pet dogs. In the present study we show that canine dendritic cells can be generated from cells extracted from leukocyte reduction filters, normally a disposable by-product of blood donation.

METHODS

Monocyte enriched cultures were grown *in vitro* for 7 days in the presence of canine granulocyte-macrophage colony stimulating factor, canine interleukin 4 and human Flt3-ligand.

RESULTS

Cultured cells demonstrated typical dendritic cell morphology and were shown to express high levels of MHC Class II by flow cytometry.

STATEMENT (CONCLUSIONS)

In line with the 3Rs principle to reduce replace and refine the use of animals in scientific research, this protocol will enable the generation of dendritic cells from a wide range of dog breeds and MHC-types for use in future immunological studies.

Age and breed related variation in white blood cells in privately owned dogs in the United Kingdom

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OBJECTIVES

Standard haematological markers are widely used in small animal veterinary medicine to monitor health. Reference intervals are wide, representing large, diverse populations.

This study aimed to examine age and breed related variation in canine white blood cells (WBCs) in the UK.

METHODS

Results of 6882 haematological panels of privately owned canine blood donors enrolled in The Pet Blood Bank UK programme were retrospectively collected. Donor profiles were excluded if date of birth, breed, sample date or unique donor number were not registered. Of enrolled profiles 5928 met the inclusion criteria and were used for multivariate regression analysis, with crossbreeds as reference standard.

RESULTS

All WBC lines showed age and breed related variation. Age related effects were still present if dog fixed variables (e.g. breed, gender, geographical location) were included in the analysis. WBCs all showed a parabolic relationship to age within provided reference intervals, decreasing from one year, showing a nadir around seven years, increasing afterwards. All breed related variation was seen within provided reference ranges, except for