

and photographic documentation. All dogs have a complete healing of the lesions after one month of treatment with PRP, without using other drugs other than antibiotics. No recurrences were observed in one month follow up.

Autologous PRP obtained with a in-house double centrifugation method appears to be an effective, minimally invasive therapy in the treatment of perianal fistulas and aural hematoma in dogs.

**Disclosures:** No disclosures to report.

**Reference:** 1. Perego R., *et al. EC Veterinary Science* 2.3 (2015): 126–132.

#### ESVIM-P-8

#### IMMUNOGLOBULIN A IN NOVA SCOTIA DUCK TOLLING RETRIEVERS WITH IMMUNE MEDIATED DISORDERS. H. Hansson-Hamlin, H.D. Bremer. Swedish University of Agricultural Sciences, Uppsala, Sweden

Dogs of the breed Nova Scotia duck tolling retriever (NSDTR) are affected by several immune-mediated diseases, in particular steroid-responsive meningitis-arteritis (SRMA) and an immune-mediated rheumatic disease (IMRD).

The typical, acute form of SRMA is often characterized by cervical rigidity, pain and pyrexia.

IMRD is a systemic lupus erythematosus (SLE)-related disease characterized by chronic stiffness and pain in several joints. Initial signs of IMRD are usually shown between 2–6 years of age, while acute forms of SRMA often are seen between 6–18 months.

Several studies have shown that dogs with SRMA often display elevation of immunoglobulin A (IgA) concentrations in both serum and cerebrospinal fluid. Another study identified NSDTRs as a breed with generally low serum IgA levels. In dogs, IgA production has been reported to be age-dependent and has been assumed to be stabilized at around one year of age.

The aim of this study was to investigate serum IgA levels in NSDTRs affected by SRMA, IMRD and healthy controls. Serum IgA was measured by ELISA (dog ELISA Set, Nordic BioSite, Sweden).

Dogs included in the study were 12 NSDTRs with acute SRMA (before treatment), 10 NSDTRs with SRMA (after treatment, no clinical signs), 6 NSDTRs with IMRD, 10 healthy NSDTRs and 10 healthy dogs (representing 10 other different breeds). There was a slight elevation of the mean IgA in NSDTRs with acute SRMA (2.1 g/L with SD = 1.2) and IMRD (1.9 g/L with SD = 1.4) as compared to NSDTRs after treatment (1.4 g/L with SD = 0.5) and healthy NSDTRs (1.4 g/L with SD = 0.3). The mean IgA in healthy dogs from other breeds was 1.6 g/L (SD = 0.7).

The changes in NSDTRs with SRMA were minor as compared to studies of other breeds with SRMA. Maybe SRMA in NSDTRs is influenced by other etiologic factors such as other genetic background. We have earlier shown that there may be a genetic locus shared between SRMA and IMRD in NSDTRs. Moreover, NSDTRs in the group with acute SRMA were younger than the dogs in the other groups, with 67% being under one year. Thus, the low age may in the present study have influenced the IgA values negatively.

In conclusion, this study did not show a clear elevation of serum IgA in NSDTRs with SRMA as shown for other breeds with this disease. Healthy NSDTRs did not display lower values of serum IgA as compared to healthy dogs of other breeds.

**Disclosures:** No disclosures to report.

#### ESVIM-P-9

#### INVESTIGATION OF THE COAGULATION SYSTEM IN CANINE IDIOPATHIC PULMONARY FIBROSIS. E. Roels<sup>1</sup>, N. Bauer<sup>2</sup>, C. Lecut<sup>1</sup>, F. Billen<sup>1</sup>, C. Soete<sup>1</sup>, A. Moritz<sup>2</sup>, A. Gothot<sup>1</sup>, C. Clercx<sup>1</sup>. <sup>1</sup>University of Liège, Liège, Belgium, <sup>2</sup>Justus-Liebig-Universität, Giessen, Germany

Canine idiopathic pulmonary fibrosis (CIPF) is a progressive interstitial lung disease mainly affecting old West Highland white terriers (WHWTs). CIPF shares several clinical and pathological features

with human IPF. An imbalance between thrombosis and fibrinolysis has been demonstrated in human IPF patients favouring a local and systemic prothrombotic state which correlates with disease severity and outcome. The aim of the present study was to investigate the coagulation and fibrinolysis systems in CIPF. For this purpose, coagulation profile and thromboelastography data were collected and compared between WHWTs affected with CIPF and unaffected WHWTs (CTRL). Coagulation times (PT, aPTT), plasmatic concentrations of fibrinogen, D dimers, antithrombin III, Protein S and Protein C activities, anti-factor Xa activity (FXa), and activated Protein C ratio (APCR) were retrospectively measured using the STA Compact automated coagulation analyzer from previously stored (–80°C) plasma samples obtained from 20 CTRL and 14 CIPF WHWTs. Point-of-care rotational thromboelastometer (ROTEM) was employed to prospectively measure clotting-time,  $\alpha$ -angle, amplitude at 10/20/30 min, maximal clot firmness, lysis after 30/60 min, and maximum lysis on whole-citrated blood sampled from 15 CTRL and 9 CIPF WHWTs. Statistical analyses were performed with a commercially available software using Student-*t* test or Mann-Whitney test for continuous variables, and Fisher's exact test for categorical variables. Statistical significance was set at  $P \leq 0.05$ . Compared with CTRL, WHWTs affected with CIPF demonstrated a longer aPTT (mean  $\pm$  SD) ( $12.2 \pm 0.9$  sec versus  $11.5 \pm 0.7$ ,  $P = 0.028$ ), whereas results obtained in both groups were all within reference ranges. A trend for an increased fibrinogen concentration ( $4.1 \pm 1.8$  g/L versus  $3.1 \pm 1.1$ ,  $P = 0.067$ ) and for a decreased APCR (median, range) (25.6, 21.9–27.7 versus 26.8, 23.8–64.4) in WHWTs affected with CIPF was observed, while there was no significant difference between groups for the other factors assessed. FXa was found above the upper limit of the reference range in 3 WHWTs affected with CIPF, but in none of the controls ( $P = 0.075$ ). ROTEM results demonstrated no significant difference between groups for any of the parameters studied. Results of the present study provide no clear evidence for a hypercoagulable state in WHWTs affected with CIPF. High fibrinogen concentrations found in CIPF WHWTs tend to suggest a proinflammatory state which may be a risk factor for thrombosis, but this finding should be confirmed by further investigation in larger cohorts of dogs.

**Disclosures:** No disclosures to report.

#### ESVIM-P-10

#### REFERENCES INTERVALS IN SHETLAND SHEEPDOGS: IS PRIMARY HYPERLIPIDEMIA A REAL FEATURE IN THIS BREED? B. Ruggerone, P. Scarpa, M. Giraldi, S. Paltrinieri. Università degli Studi di Milano, Milano, Italy

Clinical decisions are often based on the comparison of patient's laboratory results with reference intervals (RI). Several breeds have physiological peculiarities that induce variations in RI compared to the general canine population. However, no information is available about the need to establish breed-specific RI for Shetland Sheepdogs, a breed reported to be potentially affected by physiological hyperlipidemia.

The aim of this study is to determine whether RI referred to the general canine population may be applied to Shetland Sheepdogs from Italy, and to determine breed-specific RI, when the general RI were not validated.

To this aim, 60 clinically healthy fasted Shetland Sheepdogs (24 males, 1 neutered male, 31 females and 3 spayed females, age 1–8 years, Median 3.5), that represent the 36% of the Italian population registered at the National Breed association, were examined. Dogs with clinical signs of disease, receiving medications (except antiparasitic treatments) and pregnant females were excluded.

Routine haematology was performed using a laser based cell counter (Sysmex XT-2000iV; Sysmex). An extended panel of biochemical analytes was determined on serum using an automated spectrophotometer (Cobas Mira, Roche Diagnostics). The transference method was used to compare the results of Shetland Sheepdogs with the RI of the general canine population. If more than 25% of values were outside the claimed RI, new RI were calculated according to the ASVCP guidelines, using an Excel spreadsheet with the Reference Value Advisor (2.0) set of macroinstructions after removal of far outliers. Based on data distribution, a non-parametric method or the Robust method were used to define the RI with 90% confidence interval.