

complete TT4 follow-up for one year was available for 50 (67%) cats, 42/50 receiving antithyroid drugs and 8/50 eating an iodine-restricted diet. Euthyroidism appeared more rapidly achieved (4 versus 9 weeks) but less stable in cats receiving antithyroid drugs compared to cats eating a specialized diet, even for outdoor cats. Side effects were uncommon (16% and 0% with medicinal and dietetic treatment, respectively). After one year, 37 (50%) owner surveys were available. Most owners (35/37) were satisfied or very satisfied with the treatment issue.

In this study, reversible treatment options for feline hyperthyroidism were largely preferred but irreversible options were rarely proposed. Efficacy, safety and owner compliance were high for dietetic and medicinal options. Iodine-restricted diet, although less popular than antithyroid drug, provided promising comparative results.

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#### ESVE-P-11

**CUSHING'S SYNDROME – AN EPIDEMIOLOGICAL STUDY BASED ON AN ITALIAN CANINE POPULATION OF 21,281 DOGS.** E. Malerba<sup>1</sup>, G. Carotenuto<sup>1</sup>, C. Dolfini<sup>1</sup>, F. Brugnoli<sup>2</sup>, P. Giannuzzi<sup>3</sup>, G. Semprini<sup>4</sup>, P. Tosolini<sup>5</sup>, F. Fracassi<sup>1</sup>. <sup>1</sup>University of Bologna, Ozzano dell'Emilia, Bologna, Italy, <sup>2</sup>Ospedale Veterinario I Portoni Rossi, Bologna, Italy, <sup>3</sup>Ospedale Veterinario Pinigry, Bari, Italy, <sup>4</sup>Centro Veterinario Bolognese, Bologna, Italy, <sup>5</sup>Ambulatorio Veterinario Schiavi, Udine, Italy

Cushing's syndrome (CS) is one of the most commonly recognized endocrine disorders in dogs. To our knowledge, there is only one epidemiological study published in 1982 that evaluated the incidence of the disease. In studies on canine CS it is frequently reported an apparent predisposition for the female gender, but none of such studies can prove it because of the lack of a control population.

The aim of this multicenter retrospective study was to investigate the epidemiological characteristics of CS in an Italian canine population.

Data were derived from 21,281 client-owned dogs selected from electronic databases of 5 veterinary clinics, scattered throughout the Italian territory and evaluated between September 2012 and September 2014.

For the calculation of the prevalence, the dog population of one center (university reference center for CS) was evaluated separately from the population of the four clinics that were not reference centers for CS.

In total 104 dogs were identified with CS on the basis of history, clinical and laboratory findings and positivity to LDDS test and/or ACTH stimulation test. The prevalence in the 4 clinics was 0.20% (95%CI, 0.13–0.27) and was significantly different compared to the reference center (1.46%; 95%CI, 1.12–1.80).

Mean (SD) age for dogs with CS was 9.8 ( $\pm$  2.5) years, and only 5/104 dogs (5.5%) were  $\leq$  5 years. Of 104 dogs with CS, 19.2% (95%CI, 11.6–26.8) were intact females, 43.3% (95%CI, 33.8–52.8) were neutered females, 29.8% (95%CI, 21.01–38.60) were intact males and 7.7% (95%CI, 2.58–12.82) were neutered males. Females had higher risk of CS compared to males (O.R. 1.84; 95%CI, 1.46–2.03); neutered dogs had higher risk than uncastrated dogs (O.R. 2.54; 95%CI, 2.32–2.76) and neutered females had higher risk compared to intact females (O.R. 2.61; 95%CI, 2.28–2.94).

Using the mixed breed dogs as a control population (OR: 1) the risk of developing CS was significantly higher in the standard Schnauzer (OR: 58.1;  $P < 0.0001$ ), Fox Terrier (OR: 20.33;  $P < 0.0001$ ), Cavalier King Charles Spaniel (OR: 8.02;  $P < 0.0001$ ), Boxer (OR: 7.67;  $P < 0.0001$ ), Shih-tzu (OR: 6.56;  $P = 0.0033$ ), Bolognese (OR: 6.30;  $P < 0.0001$ ), Pit bull (OR: 5.98;  $P = 0.0009$ ), Jack Russel Terrier (OR: 5.65;  $P = 0.0081$ ), Maltese (OR: 4.89;  $P = 0.001$ ), miniature Dachshund (OR: 3.51;  $P = 0.0027$ ), miniature Poodle (OR: 3.44;  $P = 0.0033$ ) and Yorkshire Terrier (OR: 3.42;  $P = 0.0018$ ).

The results of this study have identify a prevalence of 0.2% of CS in an Italian canine population. The data support the existence of sex predisposition in developing CS with the highest risk for neutered females. As observed in other studies, some breeds are more predisposed to develop CS.

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#### ESVE-P-12

**ELUCIDATING RISK FACTORS FOR FELINE DIABETES MELLITUS.** T. Öhlund<sup>1</sup>, A. Egenvall<sup>1</sup>, T. Fall<sup>2</sup>, H. Hamlin<sup>1</sup>, H. Röcklinsberg<sup>1</sup>, B. Ström Holst<sup>1</sup>. <sup>1</sup>Swedish University of Agricultural Sciences, Uppsala, Sweden, <sup>2</sup>Uppsala University, Uppsala, Sweden

Diabetes is a common endocrinopathy in cats and resembles type 2 diabetes in humans. The etiology and pathogenesis of feline diabetes is not fully understood, but a combination of genetic and environmental factors is believed to contribute. Obesity is reported as an important risk factor for diabetes in both cats and humans.

The aim of the study was to assess the associations of environmental risk factors with feline diabetes through a web-based questionnaire in a large case-control study.

A letter of invitation to participate in the web survey was sent out by mail to 6822 owners to cats with a previous or ongoing insurance in Agria Animal Insurance. The study population included cats with a diagnosis of diabetes during the years 2009–2013 ( $n = 1369$ ) and a control group of cats ( $n = 5363$ ) without the diagnosis, matched on birth year with the diabetic cats. The web survey contained questions on e.g. the signalment of the cat, environment, activity level, access to the outdoors, feeding regime, type of diet, eating habits, body condition, health, medications, vaccination status, other animals in the household, or if other changes had occurred in the cat's life before the diagnosis of diabetes.

A total of 2171 complete replies were acquired, of which 481 from diabetic cats and 1690 control cats (answering frequency 35% and 32%, respectively). Results from a multivariable logistic regression showed significant associations between a diagnosis of diabetes and several of the responses in the questionnaire. Burmese breed, being male, being an indoor cat, having a greedy eating habit, and being overweight were all independently associated with increased odds of diabetes.

Our results, from the so far largest case-control study of diabetic cats, verify previous reports on being overweight and living indoors as important risk factors for diabetes in cats. Being a greedy eater is a new potential risk factor for diabetes in cats.

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#### ESVE-P-13

**EVOLUTION OF SYSTOLIC BLOOD PRESSURE IN DOGS WITH HYPERADRENOCORTICISM DURING THE FIRST SIX MONTHS OF TREATMENT WITH TRILOSTANE.** P. García San José<sup>1</sup>, C. Arenas Bermejo<sup>2</sup>, S. García Díaz-Ropero<sup>1</sup>, I. Clares Moral<sup>1</sup>, M.D. Pérez Alenza<sup>1</sup>. <sup>1</sup>Complutense University of Madrid, Madrid, Spain, <sup>2</sup>Queen's Veterinary School Hospital, University of Cambridge, Cambridge, UK

Hypertension is frequent in dogs with hyperadrenocorticism (HAC) even when adequate control of HAC is achieved. The aim of this study was to evaluate systolic blood pressure (SBP) before and during the first 6 months of trilostane treatment in dogs with newly diagnosed HAC and to determine whether there is association with the control of the disease.

Forty-three client-owned dogs were diagnosed with HAC at the Veterinary Teaching Hospital Complutense Madrid between January 2013 and December 2015 following the ACVIM consensus guidelines. Trilostane treatment was initiated at a starting dose of 0.5–1.5 mg/kg BID. Dogs were evaluated at one ( $n = 26$ ), three ( $n = 19$ ) and six ( $n = 15$ ) months after treatment (MAT). History, physical exam, hematology, biochemistry, ACTH stimulation and blood pressure using Doppler ultrasonography were assessed in every visit. Dogs with chronic kidney or cardiac diseases (stages C/D) or receiving antihypertensive medication at diagnosis were excluded. Hypertension was defined as a SBP  $\geq 150$  mm Hg. Following the ACVIM guidelines, hypertensive animals were sub-classified according to the risk of target organ damage (RTOD) and antihypertensive treatment (benazepril and/or amlodipine) was administered if deemed appropriate.

Twenty-six dogs were included, 15 females and 9 males. Ages ranged from 7 to 15 years. Twenty dogs (77%) were hypertensive at diagnosis and 15/26 (58%) were at severe RTOD. Prevalence of hypertension was similar throughout the study (73% 1-MAT, 84%