Oral presentations

compared to the two other groups independently using a Mann-Whitney U Test. The relationship between HbA1c and fructosamine in 13 diabetic patients was evaluated using Pearson correlation.

RESULTS

Group 1 was statistically different from both Group 2 and Group 3 with a P value <0.05. Using Pearson correlation, no significant relationship was found between HbA1c and fructosamine measurements. Three patients had sequential HbA1c and fructosamine measured over a ten month period. In two of these patients, HbA1c and fructosamine measurements decreased with a concurrent marked clinical improvement. In the other patient, who was experiencing a Somogyi

overswing, HbA1c and fructosamine levels initially increased before reducing when the glycaemic control and clinical signs of the patient improved.

CONCLUSIONS

HbA1c values are statistically different in uncontrolled diabetic patients compared to a normoglycaemic control population. HbA1c concentrations are not correlated to fructosamine measurements reflecting the difference in time over which they are created. Sequential HbA1c measurements in 3 patients were in agreement with the clinical course. HbA1c measurements should be further investigated for their correlation with long term glycaemic control and prognosis in canine diabetics.

The diagnosis, treatment and therapeutic monitoring of canine hypothyroidism in primary care practice in the UK (2009–2014)

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INTRODUCTION

Canine hypothyroidism is a common endocrinological disease in small animal practice, yet it remains a diagnostic challenge. Many publications provide recommendations on the optimal diagnosis and management, however no studies have examined the methods used by UK veterinary surgeons to diagnose and manage the disease. The aim was to review the approaches used in the diagnosis, treatment and therapeutic monitoring of canine hypothyroidism in UK primary care practice, and establish how closely the methods used follow published recommendations.

METHODS

Case records of 277 dogs tested for hypothyroidism at four UK primary care veterinary practices were reviewed to determine the signalment, history and presenting signs that influenced the decision to test. Haematological and biochemical abnormalities and the specific endocrinological tests used were also reviewed. It was noted whether potential underlying non-thyroidal illness and drug interference prior to thyroid testing were considered. Where hypothyroidism was diagnosed, the methods used to monitor treatment efficacy were recorded.

RESULTS

The most common clinical signs prompting thyroid testing were dermatological (77.0%) and metabolic (61.3%). Routine haematology and biochemistry profiles were conducted prior to thyroid testing in 64.2% of cases, and medication which could interfere with thyroid function testing was discontinued in 10.3% of cases where it was a potential confounding factor. First-line diagnostic testing usually comprised total thyroxine (tT4) (98.5%) ± canine thyrotropin (cTSH) (72.0%), whereas free thyroxine (fT4) and thyroglobulin autoantibody (TgAA) were generally reserved for second-line testing. One veterinary practice included tT4 measurement on all routine biochemistry profiles. Hypothyroidism was subsequently diagnosed in 23.3% of cases, all of which were treated with licensed forms of levothyroxine-sodium. Bradycardia, anaemia and hypercholesterolaemia were significantly more common ($P<0.05$) in dogs which tested positive for hypothyroidism than in the whole tested population. The test typically used to evaluate therapeutic adequacy was post-treatment tT4 (80.0%).

CONCLUSIONS

These results demonstrate that primary care veterinary surgeons use common signs associated with hypothyroidism to direct initial endocrine testing. Moreover, the published recommendations for the diagnosis and management of canine hypothyroidism are generally being followed. However, routine haematology and biochemistry are often not performed at the time of diagnostic testing, which may overlook confounding factors or comorbidities. Additionally, the impact of drug interference on thyroid function testing was often overlooked. Testing may be improved by placing greater emphasis on bradycardia, anaemia and hypercholesterolaemia as markers of hypothyroidism.

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