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A CASE OF HYPOTHYROIDISM IN A DOG

K.A.N. WIJAYAWARDHANE*, R.A.C. RABEL. D.D.N.DE SILVA. AND I.D. SILVA

Department of Veterinary Clinical Sciences, Faculty of Veterinary Medicine and Animal Science, University of Peradeniya, Peradeniya.

Hypothyroidism is the result of decreased production of thyroxin (T_4) and triiodothyronine (T_3) by the thyroid gland. Naturally occurring hypothyroidism is common in dogs. The clinical signs of hypothyroidism may be vague, diffuse, and insidious in onset and therefore it is considered in the differential diagnosis of a wide range of problems.

This communication describes the clinical manifestations, diagnosis and treatment carried out in the veterinary teaching hospital, in a dog with hypothyroidism.

A seven-year-old male Pomeranian dog was presented to the Veterinary Teaching Hospital with the complaint of fatigue, alopecia and snoring during sleep since four months. Owner had also noticed a marked weight gain during the past few months. It was lethargic, dull, and intolerant to exercise. It was markedly obese without significant increase in appetite. Heavy, folds of skin were palpated especially in the cervico-thoracic regions. It had bilaterally symmetrical alopecia especially at ventral and lateral trunk and at the tip of the tail ("rat tail"). The hair coat was dry and brittle with evidence of excessive shedding and retarded hair growth. Cutaneous hyperpigmentation was seen in the ventral abdomen. Myxoedema and thickening of skin added a doughy consistency to the abdominal region. Dog showed bradycardia, weak apex beat and respiratory stridor in the anterior tracheal region on auscultation. The dog could not make female dogs pregnant in two previous occasions and later it had shown loss of libido. Marked testicular and penile atrophy was observed.

Haematology revealed normocytic, normochromic, non-regenerative anemia. Serum biochemical analyses were indicative of hypercholesterolemia (675.33 mg/dl, normal-135-270 mg/dl) and hypertriglyceridemia (211.9 mg/dl). Serum T₄ levels and T₃ levels were low and < 0.46 μ g/dl (normal 1.5-3.5 μ g/dl) and T₃ < 26.04 η g/dl (normal 45-175 η g/dl) respectively.

A radio-opaque structure was detected at the anterior cervical region just caudal to the larynx. It was thought to be the thyroid gland, which caused snoring due to the stridor heard at the anterior trachea.

Thyroid hormone supplementation (levothyroxine) was administered orally at a dose of 0.02 mg/kg/day in divided doses. Animal could tolerate the drug very well at this dose rate. In addition anti-histamine and a cough suppressant were started as palliative therapy to reduce tracheal irritation and discomfort at sleep. Two weeks after thyroxin treatment, animal became more active with reduced respiratory discomfort and there was evidence in growth of hair.

In conclusion it is important to consider hypothyroidism in the differential diagnosis in dogs presented with signs of lethargy, respiratory discomfort, alopecia with dry and brittle hair, infertility and obesity without significant increase in appetite occurring simultaneously. In diagnosis consistent high levels of serum cholesterol and triglyceride levels can also be used.