Hypothyroidism in Behavior Medicine

Canine hypothyroidism can present as a wide variety of clinical signs involving several organ systems. Signs can include skin conditions, neuromyopathies, gastrointestinal signs, infertility, lack of muscular coordination, and poor wound healing. Nonspecific behavioral components, such as lethargy, cold intolerance, decreased libido, exercise intolerance, and weight gain,may also be seen. Anecdotal reports in the past decade suggest that canine aggression may be yet another manifestation of canine hypothyroidism and can even be the single presenting complaint. A case study describes a 5.5-year-old intact male Russian wolfhound in otherwise good health that developed an intermittent “grumpy” attitude.After being seen by a board-certified veterinary behaviorist, the dog was evaluated by a veterinarian who found low total thyroxine (TT4) (0.4 Ìg/dl; 0.8 Ìg/dl reference range low end). A presumptive diagnosis of hypothyroid aggression was made, and further testing found low free TT4 (6.8 pmol/L; 9 to 40 pmol/L reference range), elevated canine thyroid-stimulating hormone (0.61 ng/ml; 0.1 to 0.4 ng/ml reference range), and a slightly increased packed cell volume (52%; 31% to 55% reference range). The dog was given thyroid replacement therapy (levothyroxine) (20 Ìg/kg body weight PO Q 12 H) and after 4 days all aggressive behavior had stopped. A 10-week recheck indicated that the TT4 value was still below the reference range, so the dosage was titrated upward. At 1-year follow-up, the dog continued to do well. The authors recommend that the routine database for all behavior cases, especially those with slow onset in mature animals, include a CBC, serum biochemical profile, urinalysis, and thyroid evaluation (a chart is included outlining factors and drugs that may affect total triiodothyronine and TT4 serum levels). Some breeds are at a higher risk for the disease (also discussed in a chart).

Canine behaviors associated with hypothyroidism.Beaver BV, Haug LI.JAAHA 39:431-434, 2003.