Hypothyroid-Caused Hyperlipidemia

Michael Schaer, DVM, Diplomate ACVIM & ACVECC, University of Florida



Weimaraner with the pathetic facies of severely hypothyroid patients. She had hypothyroid myxedema. The post-mortem images are from another dog with the same condition that contributed to its demise. The serum sample (1) is "milky" and a heart specimen (2) reveals white coronary vessels, both typical of hyperlipidemia. A coronary artery photomicrograph (3) exhibits atherosclerotic changes that caused regional myocardial ischemia. The kidney was also adversely affected by numerous cholesterol emboli (4; white deposits in renal cortex). Making a diagnosis before these advanced changes occur is important to prognosis.

Hyperlipidemia in the dog can result from a wide range of conditions including diabetes mellitus, hyperadrenocorticism, hypothyroidism, cholestasis, and nephrotic syndrome. Hyperlipidemia has been shown to be associated with particular breeds and can run in families. While its consequences can be insignificant, they can sometimes be catastrophic.