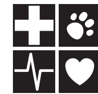
2010 Quick Tips – Surgery

Cheri Nielsen, MS DVM DACVS

Hypercalcemia due to Primary Hyperparathyroidism

Patients with persistent hypercalcemia should have a thorough evaluation including physical exam with rectal palpation, complete labwork, thoracic & abdominal radiographs, and abdominal ultrasonography. If renal function is normal, hypercalcemia is most likely due to neoplasia (esp. lymphoma or anal sac adenocarcinoma) or 1º hyperparathyroidism. A parathyroid panel including PTH, PTH-rp, and ionized Ca++ should be submitted to distinguish between these causes, even if no mass lesions have been identified. Patients with 1º hyperparathyroidism have an elevated PTH, elevated ionized Ca++, and no detectable PTH-rp. Even a PTH in the “normal” range is inappropriately elevated for a patient with persistent hypercalcemia. In many patients cervical ultrasonography can detect a parathyroid nodule. Left untreated, the hypercalcemia of 1º hyperparathyroidism may lead to renal damage and subsequent renal failure. The treatment of choice for 1º hyperparathyroidism is surgical removal of the affected gland(s). PTH levels fall rapidly after surgery, and the remaining parathyroid glands may take time to recover from the suppression of chronic hypercalcemia. Hypocalcemia is the most common post-op complication. Patients are monitored closely in-hospital until Ca levels normalize (typically 48-72 hours) to facilitate treatment and to prevent progression to severe, life-threatening hypocalcemia. Patients with total Ca >14.0 mg/dL or chronic hypercalcemia are at greatest risk for severe hypocalcemia, and these patients are often started on oral Vitamin D and/or calcium supplementation prior to surgery to minimize the need for parenteral calcium in the early post-op period. These patients are typically tapered off of therapy within a few weeks to months after surgery. Parathyroid adenomas are much more common than carcinomas, and the long term prognosis for survival after parathyroidectomy is excellent.

Cheri Nielsen



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