

Percutaneous Ethanol Injection in Primary Hyperparathyroidism

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Hyperparathyroidism is uncommon cause of hypercalcemia. Primary hyperparathyroidism (PHPT) is diagnosed in older dogs by ruling out renal and dietary causes of secondary hyperparathyroidism. Clinical signs of PHPT, such as pu/pd, anorexia, are non-specific. To confirm PHPT, ionized calcium and PTH concentration are necessary to differentiate from other causes of hypercalcemia. In addition, enlarged parathyroid gland(s) can be detected by cervical ultrasonography. Traditional treatment of PHPT is surgical resection of enlarged parathyroid gland(s). However, less invasive treatments of PHPT, such as percutaneous ultrasound-guided ethanol ablation and radiofrequency heat ablation, are recently performed. After treatment, value of calcium, ionized calcium and PTH should be monitored. The prognosis of PHPT is excellent with appropriate treatment and monitoring.

A 13 year-old, male, Pug dog was referred to Haemaru Animal Referral Hospital because of anorexia, pu/pd and listlessness. According to serum chemistry, calcium was especially increased with normal albumin value. To differentiate from other causes of hypercalcemia, we measured ionized calcium and PTH concentration and confirmed PHPT. By cervical ultrasonography, we detected enlarged parathyroid gland. By ultrasound-guided, 0.12 ml of 96-97% ethanol injection using 26 G needle were performed. After therapy, there was no side effects, such as vocal changing and laryngeal paralysis. After ethanol ablation, total serum calcium, ionized calcium and PTH concentration were monitored. Hypercalcemia and clinical signs were disappeared.

Consequently, percutaneous ethanol injection by ultrasound guided is effective and useful to treat PHPT of older dogs.

Key words: hypercalcemia, PHPT, ionized calcium, percutaneous ethanol injection

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