Trilostane Treatment in a dog with Pituitary-dependent Hyperadrenocorticism

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Introduction: Hyperadrenocorticism (HAC) is one of common multisystemic endocrine disorder in the dog. HAC is a collection of clinical and biochemical abnormalities caused by chronic overproduction of cortisol by adrenal cortices. The most commonly used drug for the treatment of HAC is mitotane, which has good efficacy, but also had potential side effects such as transient hypoadrenocorticism, drug intolerance, and high frequency of relapses. Among new alternative treatments, trilostane has recently been used for the medical treatment of HAC with a reported efficacy similar to mitotane. Trilostane is a synthetic steroid analogue, and blocking cortisol, aldosterone, and sex hormone production.

Signalment: A 10-year-old female Yorkshire terrier dog, presented with a history of weakness and shivering.

Results: Serum chemistry profile showed elevated hepatic enzyme (ALP 10,217 U/L, ALT 6,940 U/L, AST 6,612 U/L, GGT 668 U/L), and on plain radiograph and ultrasonograph, there was a abdominal mass. Surgical removal of the mass performed, but hepatic enzyme still elevated and reveal PU/PD, hepatomealy. Based on ACTH stimulation test and LDDST, the dog was diagnosed as PDH. First choice of treatment was mitotane, administrated 25 mg/kg twice a day for induction phase. After 52 days, ACTH stimulation test indicated proper suppressed adrenal response, and initiated maintenance therapy (30mg/kg, 3 times per week). After 40 days, ACTH stimulation test performed, but adrenal response increased. Because of prolonged induction phase and relapse of excessive adrenal response, we considered conversion to trilostane therapy. Therefore, trilostane was administered 30mg once daily. After 12 days, 58 days, and 150 days, ACTH stimulation test indicated proper adrenal response and continued to control until now.

Clinical relevance: Clinicians may consider the choice of trilostane instead of mitotane, if there is no response to mitotane therapy or if the induction phase is prolonged.

Key words: hyperadrenocorticism, mitotane, trilostane, dog

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