

Chunsumon Limmanont 2012: Effect of Deslorelin and Finasteride on Benign Prostatic Hypertrophy Treatment in Dogs: A Clinical Trial. Master of Science (Agricultural Biotechnology), Major Field: Agricultural Biotechnology, Interdisciplinary Graduate Program. Thesis Advisor: Associate Professor Kaitkanoke Sirinarumitr, Ph.D. 103 pages.

The study was aimed to proof, a GnRH agonist, the new alternative medical treatment in dog with benign prostatic hypertrophy (BPH). The study design was a clinical trial on the effects and adverse effects of deslorelin (a GnRH agonist) compared to finasteride (5 alpha reductase blocker) treatments and the disease recurrent time after both treatments cessations on natural BPH in dogs. Eight BPH dogs were assigned and be implanted a single dose 4.7 mg deslorelin, and another eight BPH dogs were received finasteride orally, once a day for 16 wk. Each dog was evaluated for clinical sings, skin reaction (only implanted dogs), prostatic volume, testicular volume, semen quality, semen bacterial culture, seminal cytology, blood profile, serum testosterone (T) and dyhydrotestosterone (DHT) concentrations. Adverse effects were continued to follow up at 8 and 16 wk after both treatments cessations. The clinical signs were resolved, and prostatic size and volume were decreased to normal approximately 4 wk after treatment of both medications. Deslorelin is effect on follicular stimulating hormone and luteinizing hormone down regulation, following with decrease in androgens production and secretion, including T and DHT, consequencing with spermatogenesis suppression, prostate gland shrinkage, decrease in testicular volume, and leading to anejaculation. Finasteride is effect on hypertrophic prostatic cells by type II – 5 alpha reductase inhibitor causing decrease in DHT and consquencing with prostate gland shrinkage. Finasteride does not effect on T, testicular volume, spermatogenesis, so it does not effect on semen quality. The adverse effects of both treatments were not found in the study. Anejaculation phenomenon effected on dogs at least for 40 wk after deslorelin implantation. Prostatitis should be cautioned with finasteride treatment dogs because the inflammation may be complicated during treatment and/or after treatment cessation. Conclusion, both medications are effective on BPH treatment. The disease recurrent should be monitored after treatment cessations because both medications are temporary.

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