The study was aimed to proof, a GnRH agonist, the new alternative medical treatment in dogs 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 (5α-reductase blocker) treatments and the disease recurrence time after both treatments cessation on natural BPH in dogs. Eight BPH dogs were assigned and be implanted a single dose of 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 signs, skin reaction (only in implanted dogs), prostatic volume, testicular volume, semen quality, semen bacterial culture, seminal cytology, blood profile, serum testosterone (T) and dihydrotestosterone (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 decreased to normal approximately 4 wk after treatment of both medications. Deslorelin is effective on follicular stimulating hormone and luteinizing hormone down regulation, following with decrease in androgens production and secretion, including T and DHT, consequently with spermatogenesis suppression, prostatic and testicular decrease in testicular volume, and leading to anejaculation. Finasteride is effective on hypertrophic prostatic cells by type II - 5α-reductase inhibitor causing decrease in DHT and consequent with prostatic and testicular volume, spermatozoa suppression, and leading to spermatogenesis suppression. Finasteride does not affect on T, testicular volume, and semen quality, so it does not affect on semen quality. The adverse effects of both medications were not found in the study. Anejaculation phenomenon was not found in dogs at least for 40 wk after deslorelin implantation. Prostatitis should be cautioned with finasteride treatment dogs because their inflammation may be complicated during treatment and/or after treatment cessation. Conclusion, both medications are effective in BPH treatment. The disease recurrence should be monitored after treatment cessations because both medications are temporary.