ABSTRACTS

ISCFR 2012

July 26-29, Whistler, Canada

7th International Symposium on
Canine and Feline Reproduction

In a joint meeting with

EVSSAR 2012

15th Congress of the
European Veterinary Society for Small Animal Reproduction

Editors: Gary England, Michelle Kutzler, Pierre Comizzoli, Wojciech Nizanski, Tom Rijsselaere and Patrick Concannon

Reprinted in IVIS with the permission of the ISCFR Organizers
Clinical use of deslorelin implants for the long-term contraception in prepubertal bitches

Kaya, D; Schäfer-Somi, S; Başak, K; Semra, K; Mushap, K; Cihan, K; Özgür, A; Selim, A

1Faculty of Veterinary Medicine, University of Kafkas, Turkey; 2Centre for Artificial Insemination and Embryo Transfer, Vetmeduni Vienna, Austria, 3Faculty of Veterinary Medicine, University of Ankara, Turkey.

dygkaya@gmail.com

OBJECTIVES AND METHODS: Gonadotrophin-releasing hormone (GnRH) agonists have been intensely studied for control of reproductive function in bitches (1). The suppressive effect of repeated GnRH injections on occurrence of puberty in beagle bitches is well known (2). However, concerning the use of implants in prepubertal bitches, only a few studies exist (3). During one study (3), besides other parameters, changes in height have been recorded, however, the time of epiphyseal closure was not recognized. Furthermore, Gonazon® was used, containing 18.5 mg azagly-nafarelin, which is no longer available. Therefore, the objective of this study was to investigate the deslorelin implant Suprelorin® (4.7 and 9.4 mg) for use as a long term, safe and reversible contraceptive in prepubertal bitches with special regard to the time of epiphyseal closure. Ten healthy, mixed-breed female pups (mean age: 4 months; body weight range: 6–11 kg) were used. An implant containing 4.7 mg (G1, n=5) and 9.4 mg (G2, n=5) deslorelin (Suprelorin®; Virbac, Vienna, A) or a placebo (sodium chloride 0.9% s.c, G3, n=5) were inserted subcutaneously in the inter-scapular region. Following implantation, estrus was monitored by physical (vulva swelling, serosanguineous vaginal discharge) and sexual behavioural changes, vaginal cytology, and serum progesterone (P4) and Estradiol 17β (E2) concentration, as well as body development (body weight, height at withers, long bone length, epiphyseal closure and size of vulva) weekly for the first 5 weeks, and then every 3 weeks throughout the treatment period, i.e. until the occurrence of estrus.

RESULTS: No bitch in the treatment groups showed any sign of estrous throughout the study (15-17 mo after the experiment had started) so far. Body development was unaffected by treatment. No clinically detectable side effects were noted. In G2, epiphyseal closure was completed in one animal within 17 mo and in G1 almost completed in two animals within 12-16 mo after implant placement. In all others, epiphyseal closure was not completed so far. With the exception of one animal in G2, no marked increase in serum P4 (<2 ng/ml) and E2 (<5 pg/ml) concentrations were observed during first 5 wk of treatment. However, most of the bitches in G1 and G2 showed an increase in E2 (≥ 60 pg/ml) at 37-49 weeks after the implantation. During the first 7 weeks after implant placement, an increase in superficial cell index (SCI, 5-20%) was observed in both treatment groups (n=8), however no erythrocytes were seen in these cytological preparations.

CONCLUSION: Both deslorelin implants (4.7 and 9.4 mg) can be used efficiently and safely for the long-term prevention of estrus in prepubertal bitches of medium body size, when implanted at the age of 4 months (6–11 kg). Height at withers is not significantly affected, however, epiphyseal closure is delayed.