

## MAY DESLORELINACETATE BE USED SAFELY IN BITCHES FOR CONTRACEPTION? A RETROSPECTIVE CLINICAL STUDY

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Surgical neutering is the most common method used for oestrus suppression in bitches. Due to unwanted side effects, there is an increasing demand for reversible alternatives. Over the last decade the application of Depot GnRH-agonists, as an alternative to surgical or hormonal neutering with gestagens, came into focus of veterinary research. GnRH-agonists differ from the native GnRH-molecule by their significantly higher potency and prolonged half-life.

After an implant releasing the substance over a prolonged period of time (Deslorelin acetate (DA, Suprelorin<sup>®</sup>)) was released on the market with the approved indication for induction of temporary infertility in sexually mature male dogs, it has been increasingly used off-label for bitches in private practice, as preliminary data showed that DA postponed estrus in bitches for periods of up to 27 months. According to these preliminary results treatment of bitches during anestrus will induce estrus due to the initial stimulatory effect of GnRH agonist on the gonadotropin release, whereas treatment of bitches when the minimum plasma progesterone concentration is above 5 ng/mL should prevent estrous signs.

To assess the incidence of estrus signs and other side effects occurring after treatment of bitches DA in order to suppress estrus, we performed a retrospective study. 102 bitches, which were treated once (n=37), twice (n=38), three times (n=20), four times (n=5) or five times (n=2) with DA to suppress heat were included into the study. Their owners and practitioners were questioned by a standardised questionnaire. Success of treatment was defined if neither signs of estrus nor metropathy was noted after treatment. This was achieved in 44 out of 88 dogs treated with one or two 4.7mg implants in metestrus, 2 out of 7 dogs treated after gestagen treatment (proligeston), 2 out of 6 prepubertally treated dogs and one dog treated in anestrus. The effect of one treatment lasted from 212 up to 563 days. Treatment effect seemed to be prolonged if the dog was treated with two 4.7mg implants instead of one implant (504 days versus 281 days, p=0.077). The duration of the effect was prolonged by repeated treatments in 65 dogs. However increasing age at first treatment seems to be a negative prognostic factor for treatment success. 36 (31 after the first and/ or 7 after the 2<sup>nd</sup> and 1 after the 3<sup>rd</sup> treatment) and 11 (9 after the 1<sup>st</sup> and 2 after the 2<sup>nd</sup> treatment) dogs showed induced or persistent heat, respectively. FSH and LH levels ranged between 0.4- 12.5ng/ml and 0.6 and 3.0ng/ml, respectively. The increase of the gonadotropins after treatment in metestrus occurred either in the first weeks or later on. This indicates, that progesterone may not prevent the initial increase and that the downregulation did not occur totally in every bitch, respectively. Worrying was the occurrence of metropathies in 16 bitches, of which 6 showed a reduced general condition. Treatments included ovariohysterectomy in 14 bitches, implant removal and conservative treatment in the remaining two patients. Only 56% of owners were satisfied with this alternative approach to contraception, however all 6 owners of prepubertal treated bitches loved it. Research on starting DA treatment before the first heat is ongoing.