

Use of GnRH Agonist Implants for Medical Prevention of Estrus in the Bitch

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Implants containing the GnRH agonist deslorelin (Suprelorin®, Virbac, France) are an interesting option for chemical neutering obtained through the down-regulation of the pituitary gland. In bitches, the agonist effect may at first lead to estrus induction (“flare-up effect”). As the hormonal variations throughout the bitch cycle may greatly influence the nature of this activating effect, our aim was to document the different responses that can be expected.

In this study, 60 healthy bitches (1-16 years, 1.5-60kg, 31 different breeds) were administered the implant subcutaneously in the umbilical region. The stage of the cycle was defined on the basis of history, vaginal smear, progesterone assay and ovarian ultrasound. These examinations were also performed 15 and 30 days after. Occurrence of induced estrus was assessed and down-regulation, expected to be effective when progesterone dropped below 10ng/mL, was evaluated.

Forty-one bitches were treated in anestrus vs. 14 in diestrus and 5 in estrus. When implanted in anestrus, 40/41 bitches (97.6%) expressed an induced estrus. Thirty days after implantation, 38/41 of those bitches (93%) no longer exhibited estrous signs. Estrus induction also affected 5/14 bitches (28%) implanted in diestrus: when this situation was observed, implants were removed. In 40 bitches, when induced estrus occurred, it was 4.2 ± 1.4 days after implantation. Ovulation occurred 12 ± 2 days later. Anovulatory cycles were observed in 13 bitches, 11 of them implanted in early anestrus and the 2 remaining implanted in estrus. Down-regulation was confirmed in 31/41 bitches (76%). Major side effects (ovarian cysts, n=2; persistent heats, n=2) were reported in 4/60 cases (7%). Those bitches were surgically neutered.

In conclusion, deslorelin implants appear to be a quick and safe way to neuter bitches. Diestrus seems to represent the best period to avoid estrus induction. It is advisable to monitor the implanted bitches in the 30 days following implantation in order to confirm down-regulation. Studies are ongoing to define the length of efficacy of this method.