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Popular Article

Induction of Abortion in Dogs

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Unwanted mating or mis mating is a common issue in veterinary practice, often resulting from dog owners not recognizing that their pet is in heat or underestimating the desire of a male or female dog to mate. Even well-informed and cautious owners can encounter mis mating problems with their female dogs. While spaying (ovarian hysterectomy) is the most effective way to prevent unwanted pregnancies after mis mating, some dogs may need to maintain their future breeding potential, making medical termination of pregnancy necessary.

Methods to prevent the birth of puppies after mis mating include those that prevent or interfere with implantation, those that alter the normal hormonal environment and induce resorption or abortion, or those that are directly embryotoxic.

Abortion Induction before Implantation

1. Administration of Estrogen Synthetic/Estrogen Derivatives

Mode of Action: Estrogens work by closing the utero-tubal junction, prolonging the retention of embryos in the oviduct and exerting a direct embryotoxic effect.

Treatment Protocols

Estradiol cypionate 0.5 - 1.0 mg administered once within 3 days after mis mating.

Estradiol benzoate 0.5 - 3.0 mg every other day for a total of three injections starting 4-10 days after mis mating.

Estradiol valerate 3.0 - 7.0 mg administered once 4-10 days after mis mating.

Note: High doses of estrogens can have adverse side effects, and their use is no longer considered ethical or recommended.

Abortion Induction after Implantation

2. Prostaglandins

Treatment Protocols

Safe and effective termination of pregnancy in both dogs and cats can be achieved by administering prostaglandin F_{2α} at 0.1 mg/kg subcutaneously three times a day for 48 hours, followed

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by 0.2 mg/kg three times a day until all fetuses are evacuated (confirmed by ultrasonography). This may take 5-7 or more days.

3. Dopamine Agonists

Mode of Action: Prolactin is essential for progesterone production from the corpus luteum. Dopamine agonists like bromocriptine or cabergoline suppress prolactin secretion, leading to luteolysis and pregnancy termination.

Treatment Protocols

Bromocriptine 0.1 mg/kg orally twice daily for a minimum of 6 days (up to 9-10 days for complete termination of pregnancy).

Cabergoline 5 µg/kg orally twice daily for a minimum of 4 days.

A combination of oral cabergoline and low-dose cloprostenol (PGF₂alpha analogue) injections can also be effective, starting around day 28 of pregnancy.

4. Antiprogestin Treatment

Mode of Action: Antiprotection, such as mifepristone, bind to progesterone receptors, preventing progesterone-induced changes in DNA transcription.

Treatment Protocol

Mifepristone 2.5 mg/kg orally twice daily for 4-5 days, starting after day 32 of gestation.

A combination of oral cabergoline and low-dose cloprostenol injections can also be considered, starting around day 28 of pregnancy.

5. Corticosteroids

Dexamethasone Injectable dexamethasone (5 mg twice daily intramuscularly for 10 days) and oral dexamethasone (0.1-0.2 mg twice daily with a decreasing dose for 5-10 days) have been used to terminate pregnancy in dogs when administered from mid-gestation onward.

Mode of Action: Dexamethasone can induce pregnancy termination in dogs by activating endogenous mechanisms similar to those involved in parturition.

Summary

Since a significant portion of the dogs brought in for abortifacient therapy after mis mating may not actually be pregnant, it is advisable to commence treatment only after confirming pregnancy, preferably through methods such as ultrasonography or relaxin estimation. It is highly recommended to employ ultrasonographic monitoring throughout the treatment to assess the success of the intervention and to determine the appropriate timing for concluding the termination protocol.

