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Popular Article

Management of Mis-mating in Bitch

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Abstract

Termination of unwanted or mis mated pregnancy is one of the most common requests from pet owners. Spaying is the best alternative for owners who does not want pregnancy in future. If the animal is a potential breeder, drugs are available that can prevent or terminate unwanted pregnancy. The use of these drugs must be based on the safety, efficacy, convenience, compliance in treatment, and cost of the drug.

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Introduction

The affectionate and friendly attitude of female dog than the male dogs has made them most likable to pet owners. Accidental mating or an unplanned breeding between sexually intact dogs during an estrus phase is known as mis-mating. On the other hand, termination of an established pregnancy is known as medical termination of pregnancy (MTP). The chances of mis-mating in female dogs is higher because promiscuous behavior of bitches, compounded by longer estrus period. Further, roaming outside the home or shelter during estrus phase and tendency to accept male partner increases the chances of mis-mating to a great extent. Once this happens, request for aborting sequel of mis-mating is one of the most common requests from dog owners (Eilts et al., 2002)

Indications

Prevention of accidental mating at too young or old age.

Control of the pet overpopulation.

Prevent birth of non-descript pups.

Inability of the owner to bear expenses involved rearing and caring of pups.

Therapeutic management of mismating

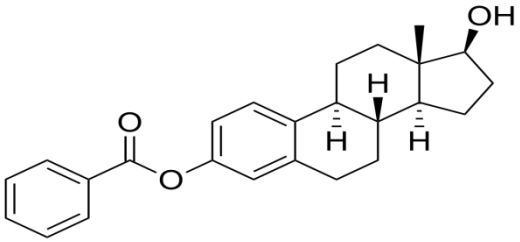

Fig-1 Chemical structure of Estradiol benzoate （Olfati *et al.*, 2018)

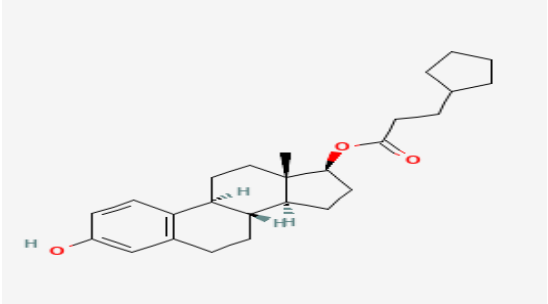

Fig-2 Chemical structure of Estradiol cypionate (Souza *et al.*, 2018)

S. No.	Drugs	Dose	Advantage	Disadvantage
1	Estradiol valerate (pregheat)	0.01 mg/kg b.wt I/M or S/C; on 0, 3rd, 5th and 7th day after mating	Early treatment of mis-mating	Even at low doses estrogens are not efficacious and safe. Side effects include continuous
2	Estradiol cypionate (Depofemin, Depo-Estradiol, Estradep	0.02 mg/kg b.wt I/M, not exceeding 2 mg total dose; only once after mating.		
3	Estradiol benzoate (progynon-c, progynon Depot)	0.2 mg/kg I/M, single injection on 5th day of mating		
4	Conjugated estrogen (permarin)	1.875 mg total dose PO, daily for 3 days within 5 days of mating		

Table-1 Management of mis-mating in bitch by estrogenic compound

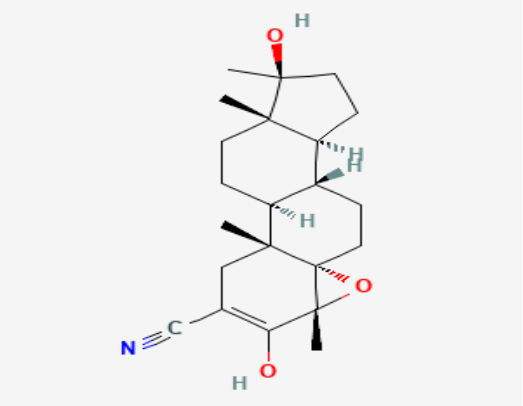

Fig-3 Chemical structure of epostane (**Rannevik *et al*., 1996)**

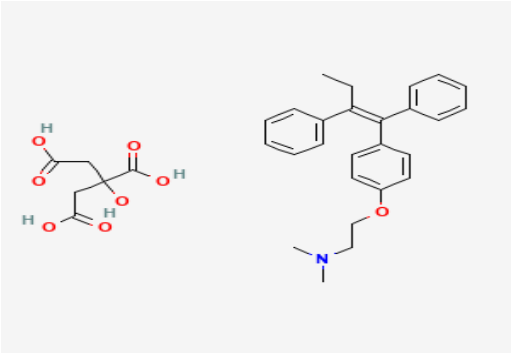

Fig-4 Chemical structure of Tamoxifen citrate (Kojima *et al*., 2007)

S. No	Drugs	Dose	Advantage	Disadvantage
1	Epostance	5 mg/kg b.wt PO for 7 days after the mis-mating	Prevents the progesterone synthesis thereby inhibiting the establishment of pregnancy at early stage	Clinical efficacy is not proven
2	Tamoxifen citrate (Novadax, Oncomox, Oncotam)	1 mg/kg b.wt PO BID for 10 days starting on the day of mis-mating	Prevent establishment of pregnancy at early stage	Side effects like ovarian cysts and endometritis, Clinical efficacy is not proved

Table-2 Epostance and Tamoxifen for management of mis-mating in bitch

Advise for pet owners:

- To identify the females bitch in early estrus phase by observing the symptoms like serosanguinous vulvar discharge, and increased roaming of the male dogs surround the estrus females.
- Not to let loose their bitch in estrous to prevent the occurrence of unwanted mating.
- If the client does not want to breed the bitch in future i would recommend an ultrasound scan 21 days after unwanted mating. If an early pregnancy is confirmed, the bitch can be spayed at this point which will prevent progression of the pregnancy and prevent future pregnancy. It is a slightly bigger surgery to spay a dog that is in the early stage or pregnancy but this approach can guarantee that the pregnancy cannot continue and will prevent accident in future.

Once mis-mating has occurred and the bitch is under medicament regimen, pet owner should be requested to follow below following guidelines:

- Provision of adequate nutritious food and fresh water ad lib to offset side effects of medication like weakness or debility and vomition.
- Follow up of hygienic measures to minimize side effects related to reproductive system
- Inform the owner that it is required to ascertain that bitch was in estrus when so called mating has taken place and undertake steps for confirmation by taking vaginal smear and looking for presence of spermatozoa.

Owner may be requested to wait till the confirmation of pregnancy to avoid unnecessary cost and side effects. Following confirmation of pregnancy at 25-30 days, termination of pregnancy can be prescribed using Cabergoline and Prostaglandins combination which are much safer to use (Parmar *et al.*, 2020).

Conclusion

Due to lack of knowledge in pet owners about estrus cycle and management of bitch. mis mating leads to produce unwanted puppies, which can create chaos in the family. To get relive owners are mostly like to approach the veterinarian for contraceptive measures. Majority of the owners are only interest to get contraceptive drugs or abortifacients' rather surgical treatment. The contraceptive drugs are still in its infancy that need to evaluate for future benefit of pet dogs.

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