

MEDICAL MANAGEMENT OF TYPE 1 VAGINAL HYPERPLASIA IN BITCHES WITH GnRH

P. Mohan¹ and G.J. Renukaradhya²

¹Associate Professor and Incharge, ²Assistant Professor, Department of Veterinary Gynaecology and Obstetrics, Veterinary College Gadag (Karnataka),

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A Pug breed dog aged three years, weighing 9.9 kg and gave birth once was brought to the Department of Veterinary Gynaecology and Obstetrics, Veterinary College, Gadag, with a history of small deep pink color protrusion in between the vulval lips since a few days and shows estrus related behaviour in this cycle. On detailed clinical examination of vagina mass found a type I vaginal prolapsed was observed. Further, the vaginal cytology confirmed estrum with more than 80 % superficial and cornified cells. All other vital parameters were within normal range. The dog was injected with synthetic GnRH @2.2 mg/Kg body weight (4.7ml) each ml of Gynarich[®] (containing 4ug/ml subcutaneously) is used for an ovulated follicle or cyst which results in high estrogen level predisposing to vaginal oedema and prolapse. After 5th day of the treatment, the prolapsed mass completely disappeared

Keywords: Estrous, GnRH, Medical Management, Pug, Type 1 vaginal prolapsed.

In canine species, vaginal hyperplasia type 1 is a clinical condition determined by an exaggeration of the estrogenic response of the vaginal mucosa, typically occurring during the proestral and estral phases of the canine reproductive cycle. The increase in the volume of the vaginal mucosa during estrus sometimes can cause its eversion, which can be defined as prolapsed of the vaginal mucosa. In Type-1 vaginal prolapsed a slight to moderate eversion of vaginal floor, without protrusion through the vulvar rim occurs (Figure – 1). Vaginal hyperplasia has been described in animals from 7 months of age. to 11 years. It can appears for the first time between the first and third estrus cycle, (Kumar, *et al.*, 2014), and can recur in subsequent cycles (Zedda *et al.*, 2016). Medium and large sized breeds, and brachycephalic dogs seem to have a predisposition to vaginal hyperplasia . The presence of a hereditary component is doubtful, although a family predisposition has been detected and there are some anecdotal reports concerning a hereditary weakness of perivulvar tissues. Ahuja *et al.*, (2016) also reported a case of a dog showing vaginal protrusion one day after mating. The aim of the present paper is to describe a conservative

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Medical treatment for Type I vaginal hyperplasia that involves the reduction of eversion and the administration of GnRH for the treatment of vaginal prolapse in canines however, it is also described in a modified form for the cattle.

Case History and Observations

The clinical study was done at the Department of veterinary Gynaecology and Obstetrics, Veterinary College, Gadag, and involved a bitch with history of small deep pink color protrusion in between the vulval lips since few days and exhibits signs and behaviour in this cycle. An clinical examination of the reproductive system was done to verify the degree of prolapse, the integrity of the prolapsed tissues, and any involvement of the urethra and the bladder.

Treatment

It was decided to medically manage the condition synthetic GnRH, GYNARICH[®] Containing synthetic GnRH 4mcg/ml.. After treatment patient has not shown any side effects, on day 2 it was observed that the mass has regressed to a small extent and the owner was adviced for for follow up. On day 5 it was observed that the prolapsed mass has

completely regressed (Fig-3). The animal recovered uneventfully.

Following days after treatment progressive regression of hypoplasia mass

was detected without without eversion through the vulvar lips. A gentle digital palpation of the vagina allowed a new reposition of the tissues without the need for further treatment.

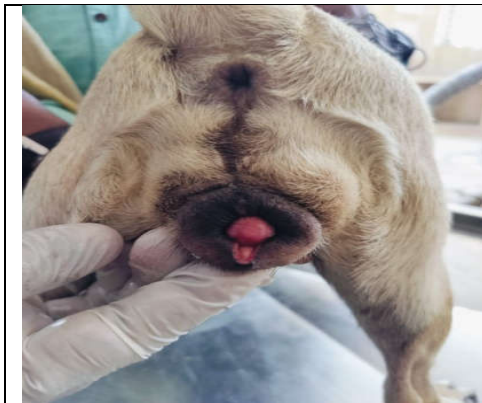


Fig. 1: Type I Vaginal Prolapse-1a

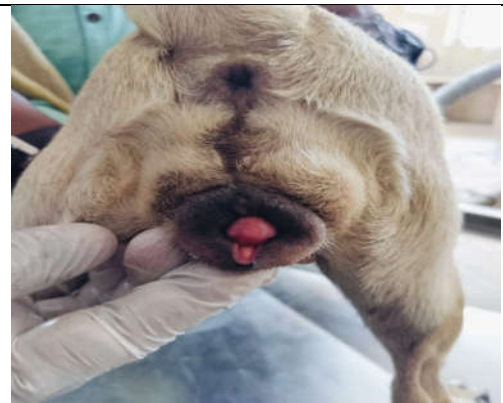


Fig. 2: By physical examination and based on degree of protruding mass it was diagnosed as vaginal hyperplasia type I, vaginal cytology was also performed to determine the stage of the estrous cycle, and the prolapsed tissues were cleansed with saline.

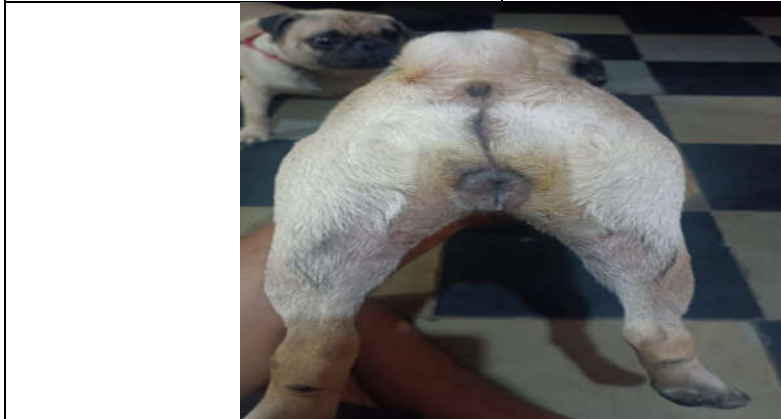


Fig-3 After treatment (on day 5)

Results and Discussion

Vaginal hyperplasia is a clinical condition that typically occurs during the follicular phase of the canine estrus cycle as also mentioned by Kumar *et al.*, 2014. Prolapse following vaginal hyperplasia, instead, is frequently seen in young females within the third estrus cycle as also reported by Galal *et al.*, 2018. In the present study, the age of the dog referred for vaginal hyperplasia was aged 07 years. The wide age range was justified by the fact that, during several estrous cycles, vaginal hyperplasia can cause protrusions of varying severity,

ranging from type I to type III. The size of the included bitches is also in agreement with the typical signaling of patients affected by this pathology: Contrary to us, several authors like Zedda *et al.*, 2016 and Ahuja *et al.*, 2017, reported a prevalence of vaginal hyperplasia in large breeds. As for the breeds involved, the consulted literature also cites Mastiffs, Dalmatians, and Dobermans. It was decided to do medical treatment by GnRH to stimulate ovulation and reduce serum estrogen level.

Conclusion

In the present case the type 1 case of vaginal hyperplasia was treated using synthetic GnRH and resulted successful regression. It is also noninvasive, effective without any side effects. The effectiveness of the therapy depends on the stage of prolapsed of vagina, however studies in more number of cases required for further recommendations.

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