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Vaginal hyperplasia in bitch: An unusual case report

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Abstract

Two years old, female pug bitch was presented for treatment following complaint of protrusion of oedematous tissue through the vulva lips since seven days. Clinical examination revealed a pear shaped vaginal mass measuring about 6 cm in diameter. The treatment involved surgical amputation of the protruding tissue. The dog had completely recovered after the treatment.

Keywords: Vaginal hyperplasia, Bitch, Surgical management

1. Introduction

In the canine species, vaginal hyperplasia is a clinical condition determined by an exaggeration of the estrogenic response of the vaginal mucosa, typically occurring during the proestrous and estrous as a result of elevated estrogen level during first or second follicular phase and may recur at each subsequent estrous if the bitch is not treated properly (Sarrafzadeh *et al.*, 2008) [1], it is possible to observe the proliferation of the vaginal epithelium, up to keratinization, accompanied by marked edema of the tissues involved. The increase in the volume of the mucosa sometimes is such as to cause its eversion, which can be defined as prolapse of the vaginal mucosa. It also known as vaginal hypertrophy, oestral hypertrophy, vaginal eversion and vaginal protrusion. It is one of the important clinical conditions commonly observed in bitches (Kumar *et al.*, 2011) [2]. Three types of vaginal hyperplasia are described. Type 1 occurs when there is a slight protrusion, even though it does not exit the vulva. Type 2, on the other hand, is when the vaginal tissue actually protrudes through the vaginal opening, while type 3 refers to the pedunculated mass, which can be seen externally. Most times, these conditions go unnoticed except in few where size of mass is big and visible out side, causing inconvenience while sitting on the floor. The various treatment modalities like hormonal therapy, surgical excision, and surgical excision with ovario-hysterectomy were available (Johnston *et al.* 2001) [3], depend on the severities of the case.

2. Case history and Clinical Observation

A 2 years old female pug weighing 8 kg was presented to the Veterinary Clinical Complex, College of Veterinary Science and Animal Husbandry, Kamdhenu University, Navsari, Gujarat, with history of a protruded mass around the vulva which was observed by the owner since one week. The owner had noticed that the mass was enlarging gradually. On clinical examination, the rectal temperature, pulse and respiratory rates of the patient were within reference ranges. There were no clinically relevant symptoms including vomiting and bradycardia. A pear shaped vaginal mass measuring about 6 cm in diameter was seen protruding out of the vulva (Fig. 1). The glistening, pale pink protruded vaginal mucosa appeared severely enlarged and edematous. There was no evidence of necrosis of the mass. According to the historical and physical examination findings, a type III vaginal prolapse was diagnosed.

3. Surgical management and Discussion

Following the diagnostic evaluation of the bitch, the mass was cleaned with normal saline and an antibiotic ointment was applied to the exposed tissue, carefully pushed back into its normal

position and the vulva lips were partially sutured with purse string sutures so as to retain the mass inside and prevent desiccation and self-mutilation by the bitch and Inj. hCG @ 300 IU, Inj. CPM@1 ml and Inj Flunixin @ 0.3 ml intramuscular was given for five days but this treatment not respond and it was decided to carry out surgical resection of the mass. The surgery was performed under general anaesthesia. The anaesthesia was induced with a combination of Ketamine @ 5 mg/ kg b. wt and Diazepam @ 1.0 mg/kg b. wt intravenously. The animal was placed on sternal recumbency and hind limbs were draped over the end of the padded table. The protruded mass was washed with normal saline to clean the area. External urethral orifice was identified and catheterized in order to avoid its damage during the sutures or surgery (Fig. 2). The pedunculated, edematous mass was ligated with absorbable sutures taking care not to include the urethra in the suture line (Fig. 3). After properly ligation the prolapsed mass was amputated (Fig. 4 & 5). The urinary catheter was removed just after completion of surgery. Regarding the post operative care and management, the animal was given Enrofloxacin@ 0.25 ml, Flunixin meglumine@ 0.2 ml, Tranexemic acid@0.5 ml and Pentoprazole@ 5mg intravenous for 5 days. The antiseptic dressing of the surgical wound was done by Betadine solution upto complete healing and the animal was recovered successfully (Fig. 6). According to owner, the urination and defecation were absolutely normal and the condition did not recur in the next cycle. Vaginal hyperplasia is most frequently observed during the first to third estrous period in young bitches and usually spontaneously regresses during luteal phase. Little is known about hereditary aspects of vaginal prolapse or hyperplasia in the bitch. An exaggeration of the estrogenic response can result in excessive mucosal folding of the vaginal floor just cranial to urethral papilla in such a way that redundant mucosa begins to protrude through the vulvar lips (Wykes, 1986) [4]. Grade III vaginal hyperplasia usually occurs at times of ovarian oestrogen production. Therefore, it is advised to ovariectomized the affected bitches and they should not be used for breeding purpose.

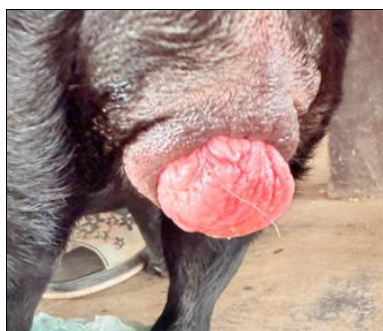


Fig 1: Type III Vaginal Hyperplasia

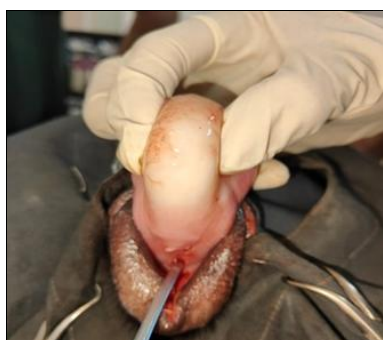


Fig 2: catheterization of external urethral orifice

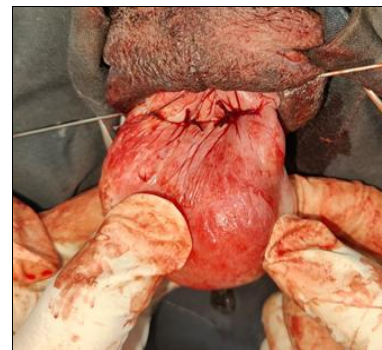


Fig 3: Ligated pedunculated and edematous mass



Fig 4: complete amputation of pedunculated and edematous mass



Fig 5: After Amputation of mass

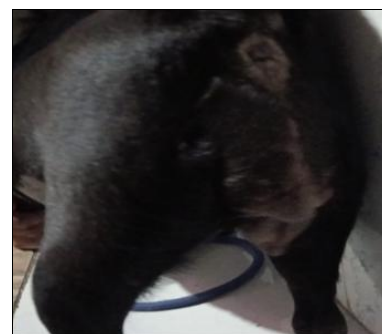


Fig 6: Twelve post operative day

Conflict of Interest

Not available

Financial Support

Not available

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