

Case Study

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Vaginal Hyperplasia and its Surgical Management in Bitch

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ABSTRACT

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A four years old Golden Retriever bitch was presented for the treatment following complaint of protrusion of oedematous tissue through the vulva lip. Clinical examination revealed a pear shaped pendulous mass was hanging from the vaginal wall. The treatment involved application of antiseptic gel and amputation of the protruded mass. The bitch had completely recovered after the surgery with no recurrence of prolapsed at next season.

Introduction

Vaginal hyperplasia and prolapse refers to a mass which protrudes from the vaginal area. 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). Vaginal hyperplasia/prolapse occurs uncommonly in bitches, during 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). 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.

Case history and observation

A 4 year old Golden Retriever weighing 25 kg was brought to Veterinary Clinical

Complex (VCC), WBUAFS, Belgachia with a history of ball shaped structure hanging from the vulva for the last three days. Clinical examination revealed a red, round, semi-soft large pedunculated mass protruding from the vulva and the case was identified as type 3 vaginal hyperplasia (Fig. 1).

Regarding the treatment, the owner was advised to keep the area clean infection free and moistened by using Metrogl DG forte gel (J.B. Chemicals and Pharmaceuticals Ltd). It was also advised to bring the animal if the protruded mass would not subside or disappear within coming 7 days. Unfortunately the owner came to VCC where the volume of the protruded mass was slightly increased. After taking owner's consent, it was decided to perform immediate surgery to remove the protruded mass.

Treatment & surgery

The surgery was performed under general anaesthesia. The animal was premedicated with Atropine sulphate subcutaneously and Xylazine intra- muscularly @ 0.04mg/kg b. wt and 1.0 mg/ kg b. wt respectively. Subsequently, anaesthesia was induced with a combination of Ketamine (Ketmax, Troikaa Pharmaceuticals Ltd.) @ 5 mg/ kg b. wt and Diazepam (Calmpose, Sun Pharmaceutical Industries Ltd) @ 1.0 mg/kg b. wt intravenously. The animal was placed on lateral recumbency and 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 (Petcryl, no-1, Futura Surgicare Pvt. Ltd.) taking care not to include the urethra in the suture line. After properly ligation the prolapsed mass was amputated (Fig. 3).

The urinary catheter was removed just after completion of surgery. Regarding the post operative care and management, the animal was given Inj Cefoperazone (SZONE, Arrear Biotech), @ 20 mg/ kg b. wt IM BD for 7 days, Inj Meloxicam (Melonex, Intas pharmaceuticals) @ 0.2 mg/kg b. wt IM OD for 5 days, Inj Vitamin B complex (Polybion, Cradel Pharma) @ 1.5 ml IV BD for 7 days, Inj Pantaprazole (Arpent 40, Arrear Biotech) IV OD for 7 days and Tab Trypsin & Chymotrypsin (Chymoral forte, Torrent Pharmaceuticals Ltd) @ 1 tab BD orally for 5 days.

The antiseptic dressing of the surgical wound was done by Betadine solution and with Muprocain ointment (T Bact, Glaxo smithkline Pharmaceuticals Ltd.) upto complete healing and the animal was recovered successfully. According to owner, the urination and defecation were absolutely normal and the condition did not recur in the next cycle.

Discussion

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.

It appears that the incidence of the condition is higher in brachycephalic breeds, such as the Boxer, Bull Mastiff and Mastino Napolitano (Schaeferes-Okkens, 2001).

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). Grade III vaginal hyperplasia usually occurs at times of ovarian oestrogen production.



Fig.1 Image showing type 3 vaginal hyperplasia in Golden retriever

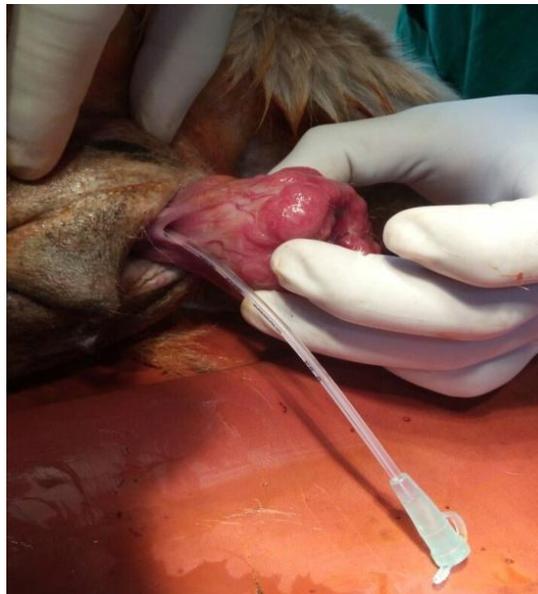


Fig.2 Image showing catheterization of external urethral orifice



Fig.3 The Image showing complete amputation of pedunculated and edematous mass

In this case it could, unfortunately, not be established whether the bitch had been under the influence of ovarian oestrogen or not. Megestrol acetate which is synthetic progesterone can be administered in early proestrus to prevent vaginal hyperplasia. GnRH, hCG have also been used to treat vaginal hyperplasia in the bitch which exerts its action by release of LH and can cause a subsequent rise in serum concentration of progesterone. Generally medical treatment is not advised as vaginal hyperplasia recurs frequently if not treated surgically. Amputation is the treatment of choice in bitches if the vaginal fold prolapses through the vulvar lips (Post *et al.*, 1991).

Though such type of cases depending on the nature, severity of the case have been successfully treated with hormonal therapy or surgical excision (Antonov *et al.*, 2009; Tiwari, 2013) and surgical excision with ovariohysterectomy (Mostachio *et al.*, 2007), were available, surgery is preferred by majority of the owner.

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