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## Surgical management of vaginal hyperplasia in a Labrador dog

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### Abstract

The case study, "Surgical Management of Vaginal Hyperplasia in a Labrador Dog," presents a clinical approach to treating an eight-year-old female Labrador suffering from Grade III vaginal hyperplasia. This condition, marked by excessive estrogenic response in the vaginal mucosa, led to significant vaginal swelling, anorexia, and dysuria. A detailed examination, including ultrasound and cytology, confirmed the diagnosis. Under general anesthesia, surgical intervention involved an episiotomy and precise excision of the hyperplastic tissue, with careful protection of the urethral opening. Postoperative care included antibiotics, pain management, and antiseptic treatment, resulting in successful recovery within two weeks. This case underscores the importance of surgical management in severe cases of vaginal hyperplasia to ensure optimal outcomes and prevent recurrence in susceptible breeds.

**Keywords:** Vaginal hyperplasia, grade III hyperplasia, episiotomy, urethral protection, hyperplastic tissue excision

### Introduction

Vaginal hyperplasia in dogs is a medical condition characterized by an increased estrogenic response of the vaginal mucosa, commonly observed during the proestrus and oestrus stages of the bitch's reproductive cycle (Post *et al.*, 1991)<sup>[2]</sup>. Three grades of the condition have been defined (Manothaiudom & Johnston, 1991)<sup>[1]</sup>. Grade I is usually asymptomatic, because the whole oedematous tissue is positioned within the vaginal lumen and can be diagnosed by vaginal examination. In grade II, a tongue- or pear-shaped part of ventral and lateral vaginal walls, just in front of the urethral orifice protrude in caudal direction through the vulvar. Surgical removal of prolapsed tissue is necessary for female dogs diagnosed with Grade III vaginal hyperplasia, as this grade is less likely to resolve completely without surgical intervention compared to Grade I and II cases. Additionally, patients with severely inflamed or devitalized hyperplastic tissue may require surgical intervention. Complications may arise due to the involvement of the urethra (Post *et al.*, 1991)<sup>[3]</sup> and trauma to the exposed tissues (Manothaiudom & Johnston, 1991)<sup>[1]</sup>.

### History and physical examination

An eight-year-old Labrador female dog was referred to the Veterinary Clinical Complex, Rewa with a history of vaginal swelling since last one month, anorexia and dysuria. On Clinical examination (per vaginal) several hard inflammatory masses attached tightly with muscles was found occupying urethral opening. Animal was restless. Taking all the symptoms into the consideration, haemato-biochemical parameters was done which revealed haemoglobin 8 gm% and leucocytosis. Vaginal cytology was also performed to determine the stage of the oestrous cycle, and an ultrasound examination was performed to rule out ovarian and uterine abnormalities.



### Anaesthesia

Surgery was performed under general anaesthesia. Pre-medication included inj. Atropine sulfate @ 0.04 mg/kg I/M to reduce salivation and prevent bradycardia, inj. Diazepam @ 0.2 mg/kg I/V to induce sedation and muscle relaxation. Induction was achieved with inj. Ketamine hydrochloride @ 5 mg/kg I/M, ensuring rapid onset of anaesthesia. For maintenance, additional doses of Ketamine hydrochloride @ 5 mg/kg, I/V was administered as needed to sustain the required depth of anaesthesia throughout the procedure.

### Surgical procedure

The treatment plan for this condition may involve amputation of the prolapsed tract, with or without subsequent ovariohysterectomy or ovariectomy, depending on the case. Pharmacological induction of ovulation is a recognized method to interrupt the estrus cycle and prevent recurrence of the prolapse during the same cycle.

The patient was placed in sternal recumbency to facilitate the procedure. A vertical incision (episiotomy) was made to allow the retraction of the hyperplastic mass from the vaginal orifice. Once the mass was retracted, a catheter was carefully passed through the urethral opening to safeguard it, as the mass had occupied the entire vaginal floor. Following this, each segment of the hyperplastic mass was removed by making individual incisions over the affected areas, ensuring precise recovery of the tissue.

### Postoperative care

Postoperative care involved antiseptic cleansing of the surgical site with Betadine solution, followed by the application of Calendula ointment and an antibiotic for 5 days to prevent infection. Pain management was achieved with an analgesic administered for 3 days. Additionally, antacids were prescribed for 5 days to mitigate any potential gastrointestinal discomfort. Sutures were removed on the 12th day, and the animal demonstrated full recovery with complete healing observed within 2 weeks.

### Conclusion

Vaginal hyperplasia represents a significant pathological issue affecting the reproductive organs of intact female dogs. There is a notable correlation between the onset age of the condition in female dogs and various breeds and grades of the condition. As a reproductive disorder, vaginal hyperplasia warrants attention within breeding programs aimed at disease control and prevention.

### Conflict of Interest

Not available

### Financial Support

Not available

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