



ISSN Online: 2456-2912
NAAS Rating (2026): 4.61
IJVSAH 2026; 11(9): 190-193
www.veterinarypaper.com
Received: 06-06-2026
Accepted: 04-08-2026
Published: 30-09-2026

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Surgical resection of a massive multinodular vaginal leiomyoma in a Dalmatian bitch: A case report

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DOI: <https://www.doi.org/10.22271/veterinary.2026.v11.i9c.3816>

ABSTRACT

Vaginal leiomyomas are rare, benign smooth muscle tumors of the canine reproductive tract, accounting for the majority of vaginal and vulvar neoplasms. In this report, a 9-year-old nulliparous Dalmatian bitch who presented with vulvar enlargement, sanguineous discharge, dysuria, constipation, and inappetence is successfully treated surgically for a giant multinodular vaginal leiomyoma. A multiloculated cystic lesion was identified by ultrasonography after a clinical assessment revealed many nodular masses. Thirteen encapsulated tumors were removed surgically using an episiotomy, and there were no problems following the procedure. Leiomyoma was verified by histopathology. With surgical excision serving as the main course of treatment, the case emphasizes the importance of aberrant ovarian activity and hormonal factors in pathogenesis. Although ovariectomy is advised to prevent recurrence linked to estrogenic stimulation, the prognosis is still excellent after full excision.

Keywords: Vaginal Leiomyoma, Tumor, Episiotomy

Introduction

There are two types of female reproductive tract tumors: those originating from the ovaries and those originating from the tubular genitalia. About 3% of canine tumours are genital tract neoplasms; of these 85-90% occurs in vagina and vulva. The majority of canine vaginal tract tumours are benign mesenchymal tumours like fibromas or leiomyomas. These tumours are smooth muscle-derived, non-invasive, slowly growing masses without the ability to spread (Klein, 2007) [1]. Any organ with a connective tissue or mesenchymal component may develop leiomyoma, a tumour of smooth muscle cells. The muscles of hollow organs such as the uterus, vagina, intestines, stomach and esophagus are typically where it originates.

Because vaginal leiomyomas are benign, they have an excellent prognosis after successful surgical excision. The preferred course of treatment for vaginal leiomyoma is surgical removal of vaginal tumors via episiotomy (Nelissen *et al.*, 2012) [2]. Ovarian follicular cysts or tumours that produce estrogen are often linked to leiomyomas of the bitch's reproductive system. Some animals may have mucopurulent to bloody vaginal discharge, although the majority of animals with uterine polyps are often asymptomatic (Chambers *et al.*, 2011) [3].

Vaginal leiomyomas can be intraluminal or extraluminal, solitary or numerous. The tumour is typically well-defined, encapsulated, and round or oval in shape. Extraluminal tumours typically result in perineal swelling, but large intraluminal tumours may protrude through the vulva. At this stage the tumour may impinge upon the urethra causing the animal to show signs of dysuria, constipation and tenesmus. The prognosis for vaginal leiomyomas is good as they are benign.

Case history and observation

A nulliparous intact female Dalmatian dog, aged 9 years weighing 27 kg, was presented to Teaching Veterinary Clinical Complex, College of Veterinary Science and Animal Husbandry Anjora Durg with a history of gradual vulva enlargement (fig. 1), sporadic sanguineous vaginal discharge, difficulties urinating and defecating, inappetence, and decreased water intake for the past month. Clinical examination reveals temperature of 102.4°F, heart rate of 104 beats per minute, respiratory rate of 16 breathes per minute, conjunctival mucus membrane appears congested. Haematological and Biochemical examination reveals increased leucocyte count ($14.5 \times 10^9/L$ with 71% neutrophils, 19% lymphocytes, 6% monocytes and 4% eosinophils), decreased haemoglobin (g/dL) and BUN, Creatinine, SGPT was in normal range. Par vaginal examination revealed multiple nodular masses. Abdominal ultrasound showed that there was a multiloculated mass with cystic cavities of various sizes.

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Treatment and discussion

Surgery was performed under general anaesthesia using Atropine sulphate (0.02 mg/kg b.wt.) by intramuscular route and Xylazine (1 mg/kg b.wt.) by intramuscular route as premedicants and Ketamine (5 mg/kg b.wt.) by intravenous route for induction and maintenance of anaesthesia after preparation of surgical site and positioning of animal in sternal recumbency (fig. 1). Catheterization of urinary bladder was done by using sterilized urinary catheter. An episiotomy was carried out at the 11 o'clock position relative to the dorsal commissure of the vulva, The vagina was seen to be very dilated, and the lumps were clearly visible (fig. 2 and 3). 13 round capsulated masses with firm consistency and variable sizes were removed out from cavity of vagina (fig. 4). Closure of the excision site was achieved by approximating the mucosa of the vaginal floor via a submucosal interrupted simple suture pattern of 3-0 vicryl and skin is sutured by 2-0 polyamide in simple interrupted manner. The dog did not experience any postoperative problems, such as incontinence or urine retention, and recovered from anaesthesia without any complication. Post opera-

tive care was given to the animal which includes an antiseptic dressing using povidone iodine and staphban ointment, intramuscular injections of cefotaxime at 25-50 mg/kg b.wt. and sutured removed after 12 days and the animal recovered successfully without any complications.

Histopathological examination of the masses was done revealing a thin layer of stratified epithelium coated the mass's connective tissue coating. The smooth muscle-derived tumor cells were arranged in parallel bundles with intermittent collagen fibres, that's a suggestive of Leiomyoma.

Abnormal ovarian activity and steroid hormone levels are the primary causes of genital tract diseases. this anomaly could be a result of aging, breed, and the use of specific medications to control the canine estrous cycle (Borges *et al.*, 2015) [4]. As demonstrated in this instance, surgical removal of the lump is the main local treatment for vaginal leiomyomas. Such damages caused by altered ovarian activity and ovarian cystic situations result in leiomyomas and uterine polyp lesions. In this instance, the patient's age and the persistence of anovulatory luteinized follicles may have played a role.

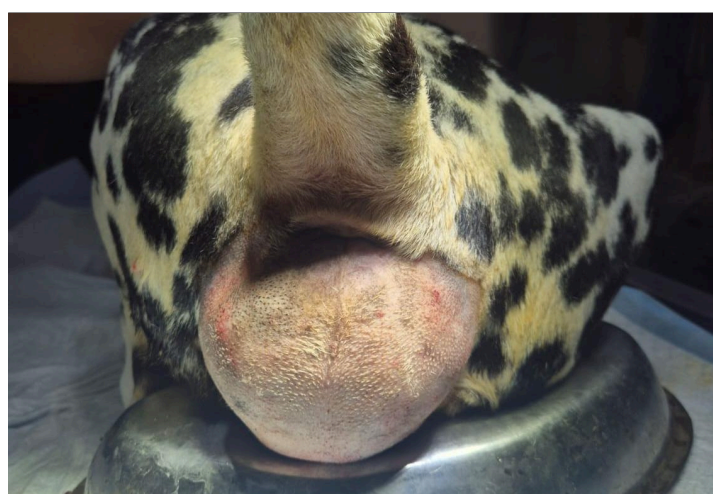


Figure 1. Enlarged vulva prior to surgery

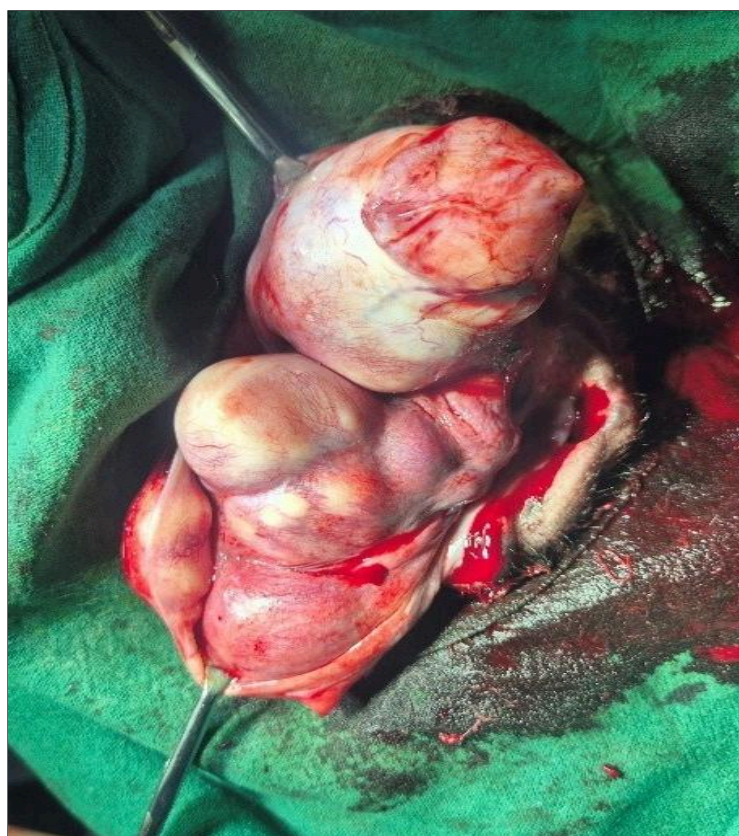


Figure 2. Multiple masses visible during surgery



Figure 3. Multiple round lumps visible after episiotomy during surgical procedure.



Figure 4. Removal of 13 leiomyoma masses from the body of the animal

Conclusion

Vaginal leiomyoma is an uncommon but clinically significant reproductive tract tumour in dogs. In this case, surgical excision of the 13 vaginal masses resulted in complete resolution of the clinical condition. Histopathological examination confirmed the diagnosis of vaginal leiomyoma. Altered ovarian activity and prolonged hormonal stimulation may have contributed to the development of the tumour. Early diagnosis and complete surgical excision, along with appropriate postoperative care, can result in an excellent prognosis and successful recovery.

References

1. Klein MK. Tumours of the female reproductive system. In: Wihtrow SJ, Macewem EG, editors. *Small Animal Clinical Oncology*. 1st edn. Philadelphia, U.S.A.: Saunders; 2007:610-618.

2. Nelissen P, White RA. Subtotal vaginectomy for management of extensive vaginal disease in 11 dogs. *Veterinary Surgery*. 2012;41(4):495-500.
3. Chambers BA, Laksito MA, Long F, Yates GD. Unilateral uterine torsion secondary to an inflammatory endometrial polyp in the bitch. *Australian veterinary journal*. 2011;89(10):380-384.
4. Borges P, Fontaine E, Maenhoudt C, Payan-Carreira R, Santos N, Leblond E, Fontbonne A. Fertility in adult bitches previously treated with a 4.7 mg subcutaneous deslorelin implant. *Reproduction in Domestic Animals*. 2015;50(6):965-971.

How to cite this article: Bainsla A, Dewangan R, Singh J, Sharda R, Patel C, Mandavi SK. Surgical resection of a massive multinodular vaginal leiomyoma in a Dalmatian bitch: A case report. *International Journal of Veterinary Sciences and Animal Husbandry*. 2026;11(9):190-193. doi: <https://www.doi.org/10.22271/veterinary.2026.v11.i9c.3816>

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