

CANINE VAGINAL FIBROMYXOMA: A DETAILED CLINICOPATHOLOGICAL REPORT OF A RARE MESENCHYMAL TUMOUR

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Abstract: A 4-year-old intact female Spitz-crossbred presented with a two-month history of vaginal bleeding, stranguria and tenesmus. Clinical examinations revealed pale mucous membranes, perineal mass and tick infestation. Vaginal palpation identified multiple firm, obstructive masses. Hematology indicated neutrophilia and anemia. Surgical intervention via dorsal commissure episiotomy allowed excision of eight encapsulated, grapelike, mucinous masses. Histopathology confirmed fibromyxoma, characterized by fibrous and myxomatous tissue with stellate and spindle cells. Recovery was uneventful with resolution of clinical signs. Postoperative management included cefotaxime (25 mg/kg) and multivitamins. This case highlights a rare benign mesenchymal tumor, emphasizing histopathology for definitive diagnosis and affirming surgical excision via episiotomy as a simple, effective and curative treatment with no recurrence observed.

Keywords: Canine, Vaginal Neoplasm, Fibromyxoma, Episiotomy, Surgical Excision, Histopathology.

INTRODUCTION

Canine vulvovaginal tumours represent 2.4–3% of all canine neoplasms and are the second most common reproductive tumours in intact females (Russo et al., 2021). Affected animals present with local compression signs including vaginal discharge, dysuria, tenesmus and weight loss (Bali, 2021). Approximately 85–90% of genital tract tumours occur in the vulva, vagina or vestibule (James et al., 2012). Common histotypes include leiomyoma, fibroma and transmissible venereal tumour, though rarer entities such as fibromyxoma are also documented (Corey and Lawrence, 2013). Fibromyxoma, a benign mesenchymal fibroblastic tumour, is characterized histologically by collagenous and myxoid stroma (Prasath et al., 2020), necessitating careful differentiation from other myxoid tumours (Alhousami et al.,

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2018). This report describes its diagnosis and surgical management, emphasizing the importance of histopathological confirmation.

CASE HISTORY AND OBSERVATION

A 4-year-old intact female Spitz-crossbred dog (16 kg) was referred to the Small Animal Obstetrical ward with a two-month history of persistent vaginal bleeding, progressive stranguria and tenesmus. Physical examination revealed dullness, depression, pale mucous membranes consistent with chronic anaemia, and severe tick infestation. Perineal inspection showed a firm bulging mass between the vulva and anus; digital vaginal examination identified multiple irregular, fixed, non-painful masses completely obstructing the vaginal lumen. Haematology revealed regenerative anaemia (PCV 35%) and mature neutrophilia ($14.5 \times 10^3/\mu\text{L}$), supporting chronic haemorrhage with secondary inflammation. A provisional diagnosis of obstructive vaginal neoplasia was made, with differentials including leiomyoma, fibroma and transmissible venereal tumour.

Treatment and Discussion

The perineum was clipped and prepared aseptically using povidone-iodine solution. Pre-anesthetic medication was provided via intravenous diazepam (0.5 mg/kg). General anesthesia was induced and maintained with a combination of intravenous ketamine (5 mg/kg) and propofol (5 mg/kg) in a 1:4 ratio. A diagonal episiotomy was performed at the dorsal vulvar commissure to achieve adequate exposure of the vaginal passage (Figure 1). Multiple round-to-oval, encapsulated masses were identified obstructing the lumen, and eight discrete tumors of varying sizes were sharply excised (Figure 2). Postoperatively, the animal received cefotaxime (25 mg/kg IV) and an oral multivitamin supplement for five days. Histopathological examination revealed proliferating bundles of fibrous connective tissue with populations of spindle-shaped fibroblasts (Figure 3) interspersed with abundant myxomatous stroma (Figure 4).

This report describes the successful surgical management of a rare vaginal fibromyxoma, a benign mesenchymal tumor seldom documented in dogs. Clinical signs of stranguria and tenesmus were consistent with space-occupying vaginal masses causing extraluminal compression of the urethra and rectum (Gupta et al., 2014). Such tumors, while not directly affecting fertility, can interfere with breeding and parturition, potentially causing dystocia (Al-Kenanny et al., 2013). Gross appearance as grape-like, encapsulated, slimy clusters is classic for myxoid neoplasms. Definitive histopathology revealed hallmark features: spindle-shaped to stellate cells within abundant intermixed collagen and myxoid matrix (Prasath et

al., 2020). This distinction is critical, as fibromyxomas may be misidentified as myxomas or fibromas on gross examination alone (Verma et al., 2023). Surgical excision via episiotomy proved simple and curative, precluding more aggressive procedures (Gajendirane et al., 2023). Immediate clinical resolution and uneventful recovery underscored complete resection efficacy. Early diagnosis and excision are paramount to prevent recurrence (Verma et al., 2023). This case contributes to sparse literature and confirms that episiotomy excision is the treatment of choice, offering an excellent prognosis (Verma et al., 2023).

CONCLUSION

Fibromyxoma is an uncommon benign tumor of the canine female reproductive tract. While its gross appearance resembles common vaginal tumors, histopathology is essential for diagnosis, revealing characteristic stellate cells and mucin production. Complete surgical excision is the treatment of choice and is typically curative with no recurrence.

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FIGURES

Figure 1. Vulvar apposition post-episiotomy was done using Trulon 'I' in a cross-mattress pattern

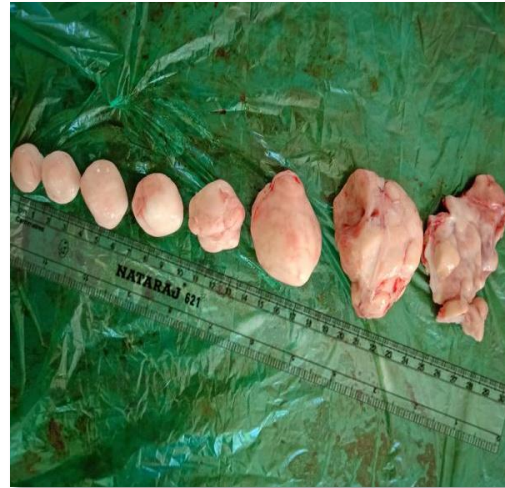


Figure 2. Excised tumour mass

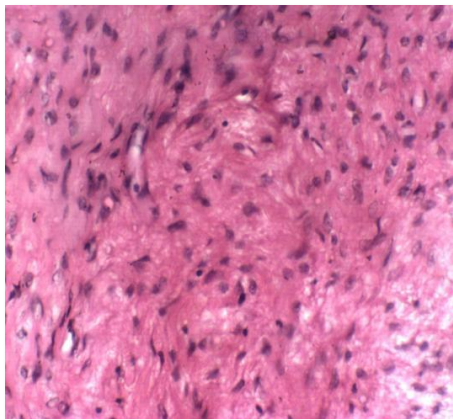


Figure 3. Dog-Vaginal mass-Histopathology- Spindle shaped fibroblasts (H&E 40x)

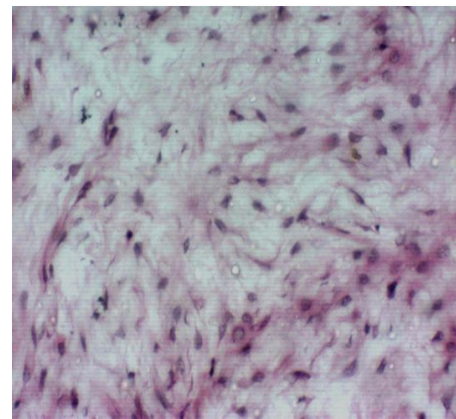


Figure 4. Dog-Vaginal mass-Histopathology-myxomatous