

Excision of prolapsed vaginal fibroma in a Golden Retriever dog

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ABSTRACT: Vaginal fibromas are a type of neoplasm that is commonly found in dogs. This report describes a case involving a 13-year-old female Golden Retriever (intact) that presented with pain during urination and a visible mass protruding from the vagina. On physical examination, the dog was found to be in shock with vaginal pain. An oval-shaped, hard texture, white mass measuring 9.3 cm x 5.5 cm, covered with blood, was observed. Hematological analysis revealed leukocytosis, lymphocytosis, granulopenia, hyperchromic microcytic anemia, and thrombocytopenia. The tumor mass was excised, and the vaginal wall was repositioned and sutured. Premedication included atropine sulfate and xylazine, and anesthesia was administered using ketamine and isoflurane. Postoperative care consisted of tolfenamic acid, vitamin K1, amoxicillin, meloxicam, and Sangobion® supplements. Histopathological examination using hematoxylin-eosin staining revealed fusiform fibroma cells. Seven days post-excision, the sutures were removed, and the vaginal condition returned to normal.

Keywords:

vaginal fibroma, prolapse, Golden Retriever, surgery

■ INTRODUCTION

Vaginal tumors are the second most common tumors affecting the reproductive organs of female dogs, after mammary tumors. The most common types of vaginal tumors are leiomyomas, leiomyosarcomas, and transmissible venereal tumors (TVT) (Kudnig & Seguin, 2022). Tumors occurring in the vagina and vulva of dogs are rare, accounting for only 2.4-3% of all canine tumor cases (Ferré-Dolcet *et al.* 2020). Fibroma is a benign tumor of fibroblast cells that often occurs in soft tissue, dermis, and subcutaneous tissue. Fibroma in the cervix of Golden Retriever dogs has been reported in Indonesia (Suartha *et al.* 2020), and fibrosarcoma in the vagina (Fauzi *et al.* 2021). While vaginal fibroma cases are frequently encountered by practicing veterinarians, incident reports in Indonesia are still rare. This case report describes the treatment of a prolapsed vaginal fibroma in a Golden Retriever dog.

■ CASES

Signalment: An unsprayed female Golden Retriever, aged 13 years, was brought to the Veterinary Teaching Hospital, Udayana University, on October 22, 2021. **History:** The owner reported that the dog had complained of pain during urination. Meaty formations protruded from the vagina, and the dog had experienced vaginal swelling for several months. The dog also had difficulty in urinating. **Clinical Findings:** The dog's rectal

temperature was 38.9°C, body weight was 22.2 kg, and BCS was 3 (scale 1-5). pulse rate, 88 beats/min; heart rate, 80 beats/min; respiration, 52 breaths/min; CRT, < 2 s; skin turgor, normal. The dog presented with panting, shock, fear, and vaginal pain. An oval-shaped, white mass (9.3 cm x 5.5 cm), hard and covered with blood, protruding from the vagina, causing pain when touched. **Examination:** Routine hematology and anatomical pathology (AP) examinations were conducted, with histopathological analysis using hematoxylin-eosin (H&E) staining at BBVet Denpasar. **Diagnosis:** Fibroma. **Differential Diagnosis:** Fibrosarcoma, leiomyoma, and leiomyosarcoma. **Prognosis:** Fausta. **Treatment:** The tumor was excised, and the vaginal wall was repositioned and sutured using Silk 2.0, a non-absorbable thread. Premedication included intramuscular administration of atropine sulfate (0.03 mg/kg) and xylazine (1 mg/kg). Anesthesia was induced using intramuscular ketamine HCl (10 mg/kg) and maintained with isoflurane gas. A 0.9% NaCl infusion was administered at 40-60 mL/kg during surgery and recovery. **Postoperative Treatment:** Postoperative treatment included a single injection of long-acting amoxicillin (15 mg/kg SC), tolfenamic acid (4 mg/kg SC), and Vitamin K1 (1 mg/kg SC). Home

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medication consisted of oral amoxicillin (15 mg/kg every 12 h for 7 days), meloxicam (0.2 mg/kg every 24 h for 5 days), and Sangobion® (1 capsule per day for 7 days). The drug doses were based on those described by Papich *et al.* (2016).

■ RESULT AND DISCUSSION

Vaginal tumors in dogs are mostly benign (73-94%). They can be found in unspayed and older dogs with no breed predisposition. The etiology is not fully established; however, there is an association between hormones and spayed status (Brodzki *et al.* 2023). Fibromas, classified as hard or soft (Rajamohan *et al.* 2018), are characterized by a firm texture and white, dry appearance (Figure 1). Large, hard fibromas can obstruct the vagina, impede urination, and cause excessive straining, potentially leading to prolapse. While difficulty urinating due to fibroma has been reported, prolapse has not (Suartha *et al.* 2020).

Hematology test results ($19.8 \times 10^3/\mu\text{L}$ leukocytosis, $18.1 \times 10^3/\mu\text{L}$ lymphocytosis, $0.9 \times 10^3/\mu\text{L}$ granulopenia, RBC $3.56 \times 10^6/\mu\text{L}$ with Hb 9.9 g/dL, Hct 20.9%, and platelet count $55 \times 10^3/\mu\text{L}$) indicated chronic fibroma and inflammation. Radiography and sonography were not performed, so the tumor presence in the cervix, uterus, or ovaries was unclear, but no palpable tumors were found in the caudal abdomen. Despite thrombocytopenia and anemia, tumor excision surgery was performed due to significant pain affecting mobility, with small blood vessels near the tumor reducing the risk of bleeding. The dog received Vitamin K1 and Sangobion supplements to manage anemia and potential bleeding, and the pain was managed with tolfenamic acid injections, followed by oral meloxicam. The dog recovered from anesthesia within a few hours and returned home. The stitches were removed seven days later, and the dog was cured.

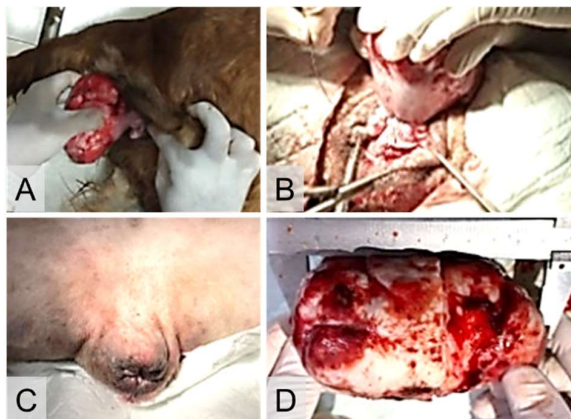


Figure 1. Palpation of prolapsed vaginal fibroma (A), tumor excision (B), post vulvar suturing (C), tumor measurement and anatomical pathology examination (D).

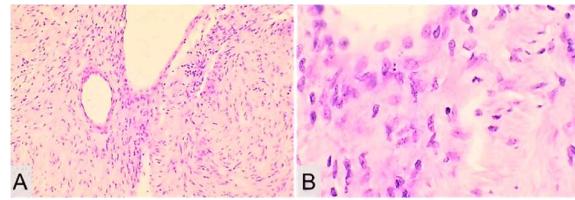


Figure 2. Histopathology of vaginal fibroma with 100 times (left) and 400 times (right) magnification (H&E stain).

Histopathologically, vaginal fibromas consist of fusiform or oval-shaped fibroblast tumor cells with oval nuclei and easily recognizable cell structures (Figure 2). These findings were consistent with those reported by Suartha *et al.* (2020). Fibrosarcoma is characterized by pleomorphism, hyperchromasia, karyomegaly, spindle cells with elongated oval nuclei, and connective tissue (Fauzi *et al.* 2021).

■ CONCLUSION

Vaginal fibromas in Golden Retriever dogs may exhibit prolapse. Treatment through excision, restoration of the vaginal wall, and vulvar suturing demonstrated promising results, with the dog recovering within seven days after surgery.

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