

Surgical Management of Multiple Vaginal Fibroma in a Golden Retriever

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ABSTRACT

A 5-year-old female golden retriever was presented with a history of swelling in perineum region with difficulty in urination and blood in urine. The case was diagnosed with vaginal fibroma on physical examination. The fibroids were removed surgically using episiotomy technique. Followed by ovariohysterectomy performed after one month. The histopathological examination of vaginal fibroma revealed the anaplastic cells show marked pleomorphism and aggregation of mononuclear cells with the bundles of spindle shaped fibrous connective cells confirmed as vaginal fibroma. The recovery was excellent and no reoccurrence was recorded up to six months follow-up

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INTRODUCTION

There are many types of tumors of the vaginal cavity and the vulvar opening have been reported previously.¹ The frequently reported reproductive tract tumors are transmissible venereal tumor, fibroma, and leiomyoma. The Vaginal fibromas are considered to be non-invasive, slow-growing, smooth muscle derived masses which do not cause metastasis in other organs.² The outer appearance like hard, white, spherical of fibroma can make an indication to diagnosis as vaginal fibroma. It may interfere with breeding, parturition and urination. Vaginal fibromas are usually differentially diagnosed from vaginal polyps, lipoma, fibrosarcoma, vaginal leiomyoma, leiomyosarcoma, transmissible venereal tumor, lipoma and adenocarcinoma.³ These tumors can be managed through complete resection locally via episiotomy combined with ovario-hysterectomy in order to prevent the recurrence.⁴ The Present case of vaginal fibroma was managed successfully via surgical resection of the tumor mass followed by ovario-hysterectomy.

History and clinical findings

A 5-year-old female with 34 kg body weight golden retriever was presented with a history of swelling in perineum region, difficulty in urination and blood mixed urine (Figure 1). The animal was having normal feed and water intake and defecation. The dog had undergone medicinal treatment earlier without any signs of improvement by local veterinarian. Per-vaginal examination revealed the hard, smooth, white coloured, spherical masses. The clinical examination revealed all physical parameter in normal limit like rectal temperature of 102.4°F, Pulse rate 80/min and respiration rate 40/min and pink mucous membrane. The complete blood count parameters were within the normal limit. Thoracic radiographic examination showed no evidence of metastasis.

Diagnosis and treatment

On the basis of physical and per-vaginal examination, the condition was diagnosed as vaginal fibroma and it was decided to perform correction of the condition surgically by using episiotomy technique due to presence of a big size lump over. The animal was placed in sternal recumbency. The perianal area prepared and scrubbed for surgery. The vaginal canal was flushed with diluted antiseptic solution. The surgery was performed under general anesthesia. The animal was premedicated with atropine sulfate @ 0.04 mg/kg b.wt. Intra-muscularly, followed by diazepam @ 0.5 mg/kg b.wt. Inta-venously. The animal was induced with Propofol



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Figure 1: Photographs showing swelling in perineum region.

@ 4 mg/kg b.wt. Intra-venously and maintained with Isoflurane inhalant anesthetic @ 2% concentration.

After proper assessment, the episiotomy was performed; the skin incision was made from the dorsal commissure of vulva along the midline toward the anus (Figure 2). The multiple masses (one big and 4 small size masses) were excised. The size of largest mass was approx. 7 cm long x 7 cm Wide (Figure 3). The vaginal canal was checked for hemorrhage. The vaginal canal was flushed with diluted povidone iodine solution. The episiotomy vaginal mucosa incision was closed with 2-0 Polygalactin 910 absorbable suture material. The outer skin sutures were done with 2-0 Polyamide non-absorbable suture material. Post-operatively, inj. Ceftriaxone and inj. Meloxicam was given to the animal for 5 days along with ranitidine and an oral multivitamin. The skin sutures were removed on 10th post-operative day.

The tissue from the vaginal mass was collected in 10% formalin for histopathological examination. Paraffin embedded tissue sections were cut into 4 µm thickness and were stained with haematoxylin and eosin (H&E). The histopathological examination revealed interwoven pattern of with scanty cytoplasm and oval to elongated nuclei. Anaplastic cells showed marked pleomorphism and aggregates of mononuclear cells were noticed at the periphery



Figure 2: Photographs showing vaginal fibroma mass after the episiotomy.

with the bundles of spindle shaped fibrous connective cells (Figure 4).

The elective ovario-hysterectomy was done after one month of first surgical procedure. With routine surgical procedure. Excellent recovery and no recurrence were observed with no complication up to six months following the treatment.

DISCUSSION

The vaginal fibroma condition mainly affected the old and aged dogs,⁵ in contrast of that, the present study reported in the middle-aged dog. No specific breed predisposition was reported for the condition, however few reports recorded certain breeds are spitz, Labrador retriever and non-descript breed of dogs.^{6,7} The clinical signs were in congruence with the reports presented earlier like hard mass protruded from vaginal canal by Balamurugan and Sivasudharsan.⁶ The size, position and number of vaginal fibroma mass requiring episiotomy for complete surgical removal of the mass maybe the first choice.⁶ However, many reports earlier have been suggesting that Aglepristone, a synthetic antiprogesterone has been used successfully to reduce the size of a vaginal fibroma in an adult bitch.⁸ Tumors related to lower reproductive tract may cause pressure to urethral opening and rectum⁹ may causes difficulty in urination and defecation

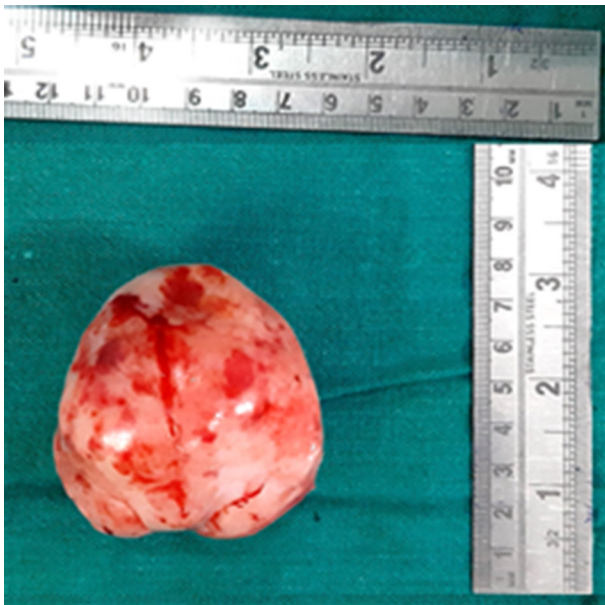


Figure 3: Photographs showing the largest size mass approx. 7 cm L X 6 cm W.

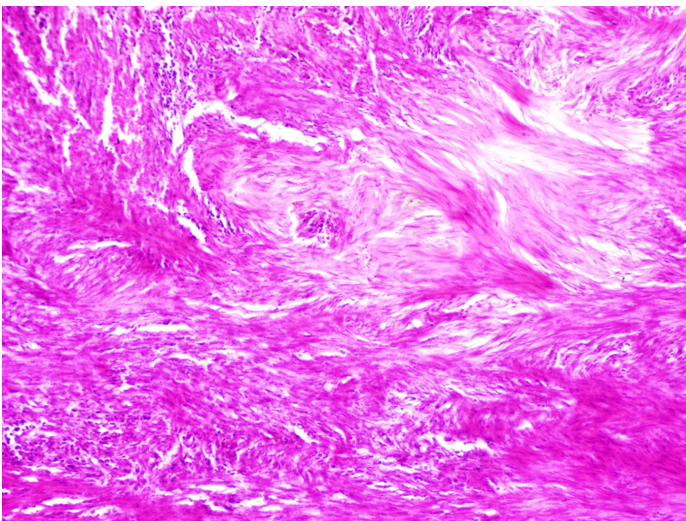


Figure 4: Histopathology of vaginal mass showing the interwoven pattern of anaplastic cells show marked pleomorphism with scanty cytoplasm and oval to elongated nuclei. (100 X). H&E stain.

corroborated to present study. All the physiological parameters were recorded within normal range.⁶ In the present study, no significant alterations in the haematological values have been reported which also stands in support of the previous findings in this aspect.²

The treatment of vaginal fibroma can be managed with complete surgical excision of the mass with episiotomy^{4,10} or more aggressive procedures such as vaginectomy, urethroplasty, and ventral pelvic osteotomy.¹¹ In present study, the ovario-hysterectomy was performed after one month of first surgical procedure, similarly, many studies suggested that, the ovariohysterectomy may

reduce the size of hormone-sensitive vaginal masses^{8,12} and the ovariohysterectomy have been recommended for this condition in order to prevent the reoccurrence.¹³

The histopathological findings were similar with the findings of Rizk *et al.*¹⁴ and Vijayanand *et al.*¹⁵ However, in present study, complete surgical excision of the mass in conjunction with episiotomy and ovariohysterectomy have been observed to be suitable technique for proper management of vaginal fibroma.

CONCLUSION

The complete surgical excision of the mass with episiotomy and ovariohysterectomy has been observed to an effective method for management of vaginal fibroma without any complication.

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CONFLICT OF INTEREST

The authors declare no conflict of interest.

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