

VAGINAL LEIOMYOMA IN A PREGNANT BITCH

J. UMAMAGESWARI^{1*}, P. SRIDEVI², S. RANGASAMY¹ AND R. SRIDHAR²

Department of Clinics, Madras Veterinary College, Chennai - 600 007

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ABSTRACT

A five-year-old pregnant bitch presented with the history of foul smelling vaginal discharge since two days was examined. Grossly, a pinkish round, solid, pedunculated mass was detected in the posterior vaginal wall which was confirmed as leiomyoma upon histopathology. The vaginal mass dropped off on its own and the bitch whelped live puppies by assisted delivery. Ovariohysterectomy was recommended to prevent recurrence.

Keywords: Bitch, Canine, Pregnancy, Vaginal leiomyoma, Vaginal mass

INTRODUCTION

Vaginal tumors comprising about 2.4-3% of all tumors in dogs are mainly leiomyomas (Brodey and Roszel, 1967). Leiomyoma is a tumor of smooth muscle cells that may arise in any organ with a connective tissue or mesenchymal component (Kang and Holmberg, 1983). Other vaginal tumours reported are fibroma, polyp, lipoma, fibroleiomyoma, neurofibroma, fibrous histiocytoma, benign melanoma, myxoma, myxofibroma, leiomyosarcoma, squamous cell carcinoma, haemangiosarcoma, osteosarcoma, adenocarcinoma, transmissible venereal tumour, mast cell tumour and epidermoid carcinoma (Thacher and Bradley, 1983 and Manothaiudom and Johnston, 1991). The present case reports vaginal leiomyoma in a nondescript pregnant bitch.

CASE HISTORY AND OBSERVATIONS

A five-year-old pregnant non-descript bitch had the history of foul smelling vaginal discharge since two days and the presence of a round, solid, pedunculated mass in the posterior vaginal wall. Ultrasound examination revealed viable fetus with gestational age around 62 days and X-ray revealed the presence of four fetuses. As per-vaginal delivery was ruled out, it was decided to go for an elective caesaren. However, the owner brought back the bitch within next few hours reporting that the bitch had started showing signs of whelping

and that during the process of straining the mass had dropped off. On clinical examination, the animal appeared healthy with a haemorrhagic discharge from the vulval region. The rectal temperature was 37°C, while, the pulse rate and respiratory rate were within normal range. On digital examination of vagina, fetal head was palpable in the vaginal passage and whelping was induced with inj 20% Dextrose (100 ml, slow iv) and inj oxytocin (10 IU, slow iv) following which four live fetuses were delivered.

On gross examination, the vaginal mass appeared pinkish in colour, solid, non-tender in consistency and measured about 6 cm (Figure 1A). A sample of vaginal mass was sent for histopathological examination and the reports showed the presence of bundles of intertwining smooth muscle cells frequently interspersed with collagen fibres (Figure 1B), and hence the mass was confirmed as leiomyoma of vagina.

TREATMENT AND DISCUSSION

Vaginal leiomyoma may exist as single or multiple, and intraluminal or extraluminal mass. The tumor is usually round or oval, well defined and encapsulated. The size and consistency may vary depending upon the duration of growth and becoming firmer due to an increase in connective tissue. The large intraluminal tumors may protrude through the vulva, while extraluminal tumors tend to cause perineal swelling

¹Assistant Professor, ²Professor; *drjumamageswari@gmail.com

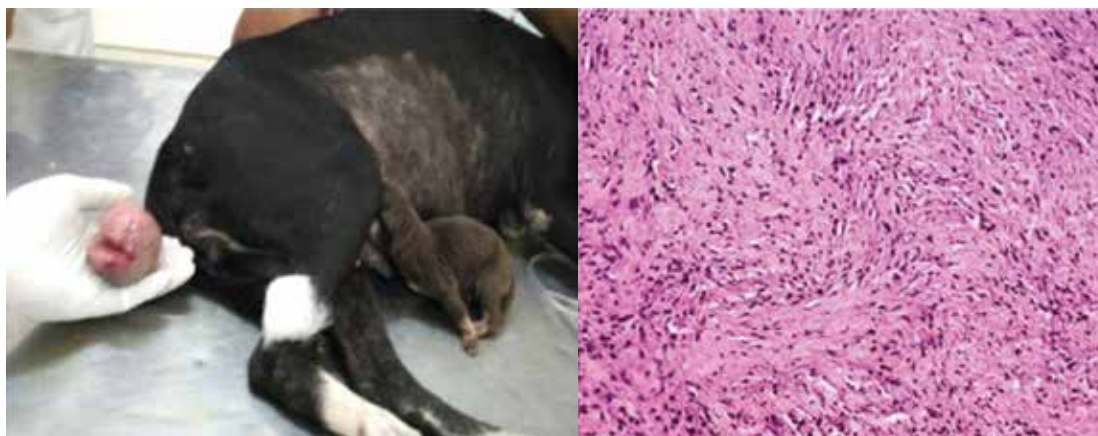


Figure 1: (A) Leiomyoma in a pregnant nondescript bitch, (B) Leiomyoma (H&E, 10X)

(Kang and Holmberg, 1983). The small leiomyoma in the vagina are usually symptomless unless they become ulcerated or infected, thus leading to discharge and irregular per vaginal bleeding. Moreover, the large tumor may cause bladder irritability, rectal pressure, tenesmus and obstructed labor.

The cause of canine vaginal tumours, with the exception of transmissible venereal tumour, is unknown. However, steroid hormones may play a role in the pathogenesis because of high incidence recorded in intact bitches. The expression of steroid hormone receptors, predominantly progesterone receptors in human genital neurofibromas were reported. The development of neurofibromas after menarche, an increase in the number and size during pregnancy, and their regression after delivery in woman have suggested an association between the growth of neurofibromas and circulating hormones (McLaughlin and Jacks, 2003). In present case, the dog had no history of hormonal contraception, therefore, it may be possible that long-term sequential estrogen or progesterone stimulation in intact bitch might have played a part in the development of tumour.

The surgical excision of vaginal leiomyoma (Herron, 1983) or use of algepristone in vaginal fibroma, a tumor showing progesterone receptor expression

(Rollon *et.al.*, 2008), are curative in dogs, but the condition usually recurs due to hormonal influences. Hence, the control and prevention of such condition is best achieved by ovariohysterectomy (Sontas *et.al.*, 2010). In the present case, although the vaginal mass dropped off on its own and the bitch whelped live puppies by assisted delivery, it was recommended to spay the bitch in order to prevent the re-growth of vaginal tumour in future.

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