Vaginal Angiofibroma in a Bitch- A case report

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Abstract
A seven year old German shepherd intact female dog weighing 20.8 kg was brought with the history of growth around the perineum region since four months with increasing in size. The animal appeared dull, anorectic emaciated and polyuria, dysuria and rough body coat was recorded. Vulval examination revealed firm mass at the vaginal walls with perineal adhesion. The mass was resected and confirmed as vaginal angiofibroma on histopathological examination.

Key words: Dog, vagina, angiofibroma, surgical management

The most common types of tumours found in the genital tract of bitches are benign, smooth muscle tumours of the vagina and vulva. They are referred to as leiomyomas, fibroleiomyomas, fibromas and polyps depending on the amount of connective tissue present (Klein, 2001 and MacLachlan and Kennedy, 2002). The tumours are usually seen in medium-aged, non-spayed, nulliparous dogs and surgery is the treatment of the choice (Klein loc. cit). Angiofibroma is a relatively rare tumour with typical histological pattern and is composed of the angiomatous and fibrous components.

Case History and Observations
A seven year old female German shepherd intact dog weighing 20.8 kg was brought with the history of growth around the perineum region since four months that was increasing in size. The owner also reported that initially it was a small mass, which had gradually grown and covered the entire perineal region. The animal appeared dull, anorectic, emaciated and showed polyuria, dysuria and rough body coat. Popliteal lymph nodes were swollen and enlarged. Vulvar examination revealed firm mass at the vaginal walls with adhesions in the perineal area. The mass was solid, 36 cm in circumference and 14 cm in diameter. The mass had compressed the entire urethra so the urinary catheter could not be passed. The excised mass was collected in 10 per cent formalin and paraffin embedded tissue sections were cut into 4 to 6 μm in thickness and stained with Haematoxylin and Eosin as per the standard procedure.

Treatment and Discussion
The animal was stabilized with 0.9 % Normal saline and premedicated using injection of atropine sulphate @ 0.4 mg/kg body weight intramuscularly followed by diazepam @ 0.03 mg/kg body weight intravenously. Cefotaxime and meloxicam were administered intravenously @ 20 mg/kg body weight and 0.2 mg/kg body weight respectively preoperatively. General anaesthesia was induced with ketamine @ 5mg/kg body weight intravenously and maintained with quarter to half the dose of ketamine and diazepam as and when it required. Surgical site was aseptically prepared and the dog was positioned in a perineal stand with the tail flexed cranially over the spine. An episiotomy was performed at the 11 o’clock position relative to the dorsal commissure of the vulva. The mass was easily visualized and it was noted that the vagina was extremely dilated. Gross examination revealed multilobulated soft to firm spherical gray white mass with red coloured nodules, approximately about 20 x 12 cm in size that was diffusely attached to the ventral vaginal wall. The urethra was compressed by the tumourous mass, so catheter No. 7 was placed in the urethra to aid defining and avoiding trauma to this structure (Bojrab, 1990). The mass was
transected in a line parallel to the urethra. The growth was excised and fixed in 10 per cent formalin for histopathological examination.

Closure of the excision site was achieved by approximating the mucosa of the vaginal floor as well as occluding the submucosal dead space via a submucosal interrupted simple suture pattern of 1-0 PGA. The episiotomy site was closed routinely.

Histopathological examination revealed, the neoplastic cells were composed of both fibroblastic type and the vascular channels with small gapping vascular channels lined by single layer of endothelial cells (Fig.1). Most of nuclei were elongated to oval shape and contained one or more prominent nucleoli. The tumour cells had a scant amount of cytoplasm. The cell boundaries were ill-defined. On the basis of the presence of fibrous and blood vascular components, the excised mass was confirmed as angiofibroma.

Primary tumours of the vulva and vagina are usually (71–82 %) benign (Thacher and Bradely, 1983). Angiﬁbroma originates from the smooth muscles of vagina and vestibule and may be intramural or extramural. In the present case, the mass was present extramurally and is generally common in aged animals (Kydd and Burnie 1986).). The main part of the lesion is composed of sinus like vascular channels with small gapping vascular channels lined by single layer of endothelium, surrounded by single or mostly incomplete rim of smooth muscle cells. The fibrous component exhibits change in the cellularity and fibrous connective tissue, sometimes associated with myxoid foci. Older lesions generally exhibits hyalinisation (Kabot et al., 1985). A more extensive surgical resection technique combining vulvo-vaginectomy and perineal urethrostomy has been described for large and infiltrative tumours of this region (Bilbrey et al., 1989). The condition usually reoccurs due to hormonal (i.e. estrogenic) influence. Thus to prevent and control the disease ovariohysterectomy is advised after the age of 6 years (Mohammed et al., 2009).

Summary

Vaginal angiofibroma was recorded in a German shepherd bitch.

References


