

*Case Study*

SURGICAL MANAGEMENT OF PROSTATIC TUMOR IN A DOG

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ABSTRACT

An eight years old non descript male dog was presented for treatment of prostatic tumor at Teaching Veterinary Clinical Complex of the Mhow Veterinary College. The owner reported that the dog suffered with the problem of vomition, inappitance, dribbling of urine along with haematuria at his last 10 days back. The dog when presented to the college clinic a large irregular solid mass of about coconut size was palpated parallel to the prepuce and animal feeling pain on palpation. On ultrasonographic examination revealed prostatic tumor (107 x 77 mm) attached to the urinary bladder and on the basis of histopathological examination prostatic tumor was adenocarcinoma in nature. Size of tumor was very large and tumor was compressing the urinary bladder so it was decided to remove the tumor surgically. The animal was restrained in dorsal recumbency after giving the general. A caudal paramedian incision parallel to os penis was given to approach the urinary bladder. The prostatic tumor mass was gently taken out through the incision along with the bladder. The tumor mass which was attached to the whole wall of the neck of the bladder was gently exteriorized. Tumor mass completely removed taking care to save the both the ureter. After removing the tumor mass $\frac{3}{4}$ of the lumen of the neck of the bladder was opened. Which was carefully sutured using 3/0 vicryl by using double row of cushing pattern. Although in the present case successful recovery was seen 10 days after surgery without any complications and catheter was kept for 21 days. The dog is sounding well till today after a lapse of period of around 04 months.

KEYWORDS: prostatic tumor, dog, vomition, inappitance, dribbling, urine, haematuria.

INTRODUCTION

Prostatic tumors or prostatic neoplasia is cancer of the prostate gland. All tumors of the prostate gland should be considered malignant, as there has not been a report of a benign prostatic tumor. The most common tumor of the prostate is prostatic adenocarcinoma (Brum, 2015). Transitional cell carcinoma is also seen. Prostatic cancer may affect any breed of dog, but is usually seen in older (average age is about 9-10 years old) medium to large breed dogs (Bell *et al.*, 1991). Castrated male dogs and intact (non-neutered) male dogs are equally as likely to get prostatic cancer (Krawiec and Heflin, 1992). Prostate cancer in dogs is rare but can be fatal. It accounts for 0.67% of all reported malignancies in dogs. Prostate cancer has a very high metastatic potential and can spread to organs like the lungs, bones and lymph nodes (Obradovich *et al.*, 1987). The effects of the hormone testosterone on the gland over time trigger the disease. Very often it leads to benign prostatic hypertrophy (BPH) in older male dogs. Prostate tumors are aggressive, highly invasive, space-occupying masses that usually have spread to the spine, pelvis, lymph nodes, lungs and/or other remote locations by the time they are detected. Adenocarcinoma is the most common type of prostate cancer in dogs. Carcinoma, fibrosarcoma, leiomyosarcoma and squamous cell carcinoma can also affect the prostate, especially in neutered dogs. Symptoms of prostate cancer tend to develop gradually and include urination

abnormalities, straining to defecate, constipation, scooting, bloody discharge from the penis, lameness, lethargy, appetite and weight loss, weakness and depression (Leroy and Northrup 2008).

CASE HISTORY, CLINICAL OBSERVATION AND DIAGNOSIS

An eight years old non descript male dog was presented for treatment of prostatic tumor at Teaching Veterinary Clinical Complex of the Mhow Veterinary College. The owner reported that the dog suffered with the problem of vomition, inappitance, dribbling of urine along with haematuria at his last 10 days back.

The dog when presented to the college clinic was in good body condition with normal rectal temperature, pulse rate, but a large irregular solid mass of about coconut size was palpated parallel to the prepuce and animal feeling pain on palpation. On ultrasonographic examination revealed prostatic tumor (107 x 77 mm) attached to the urinary bladder and on the basis of histopathological examination prostatic tumor was adenocarcinoma in nature. Size of tumor was very large and tumor compresses the urinary bladder so it was decided to remove the tumor surgically.

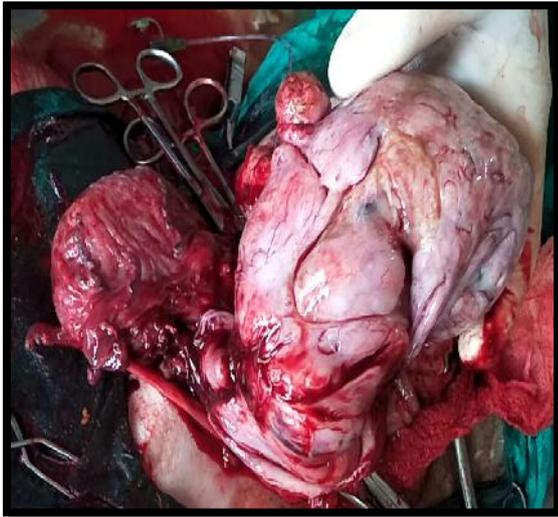
TREATMENT

The animal was restrained in dorsal recumbency after giving the general anaesthesia achieved with the combination of Inj. Atropine sulphate @ 0.02 mg/kg,bw,

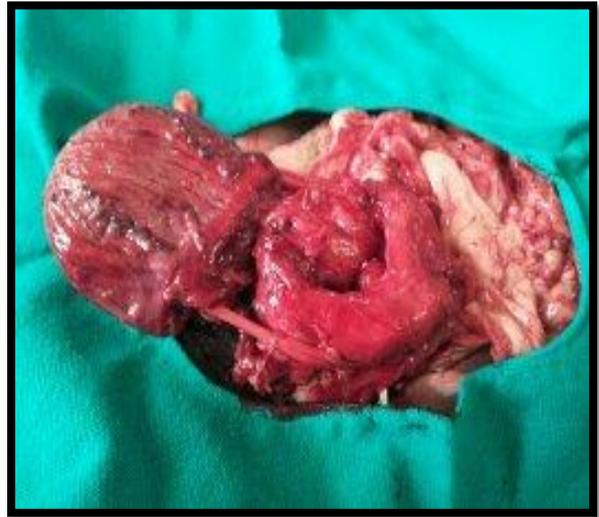
Surgical management of prostatic tumor in a dog

I/M, Inj. Xylazine hydrochloride @ 1mg/kg.bw, I/M and Inj. Ketamine hydrochloride @ 10 mg/kg.bw, I/M. Maintenance of general anesthesia was achieved by Inj. Ketamine hydrochloride by ketamine boluses due to lengthy surgical procedure. A caudal paramedian incision parallel to os penis was given to approach the urinary bladder. Ryles tube (8 No.) was passed through the urethra in to urinary bladder to drain out urine. The prostatic tumor mass was gently taken out through the incision along with the bladder. The tumor mass which was attached to the whole wall of the neck of the bladder was gently exteriorized with the help of mosquito forcep and scissor. Tumor mass completely removed taking care to save the both the ureter. After removing the tumor mass $\frac{3}{4}$

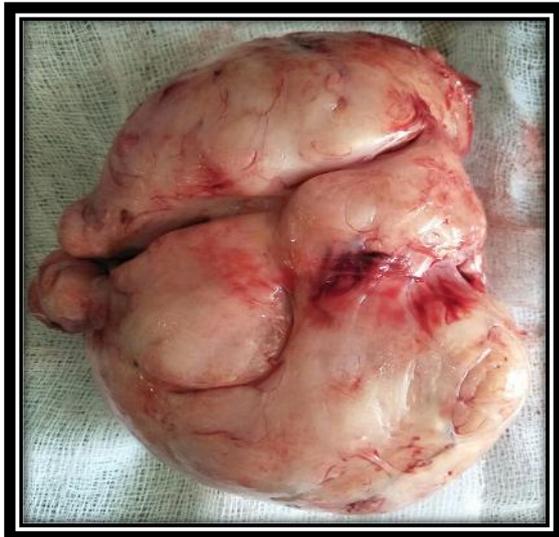
of the lumen of the neck of the bladder was opened. Which was carefully sutured using 3/0 vicryl by using double row of cushing pattern. The adhesions of the prostatic mass with the mesentery and large intestine were carefully separated and were flushed with the ringer's lactate solution. Laparotomy wound was closed in usual manner. Catheter was fixed at prepuce and remained there for next eight days. Anti septic dressing was done after surgery and owner was instructed to change dressing every day and advised antibiotic injection (Metronidazole @15 mg/ kg b. wt. along with ceftriaxone @ 15 mg/kg b. wt.) daily for 7 days and analgesic injection (Meloxicam @ 0.2 mg/kg b. wt.) for 3 days.



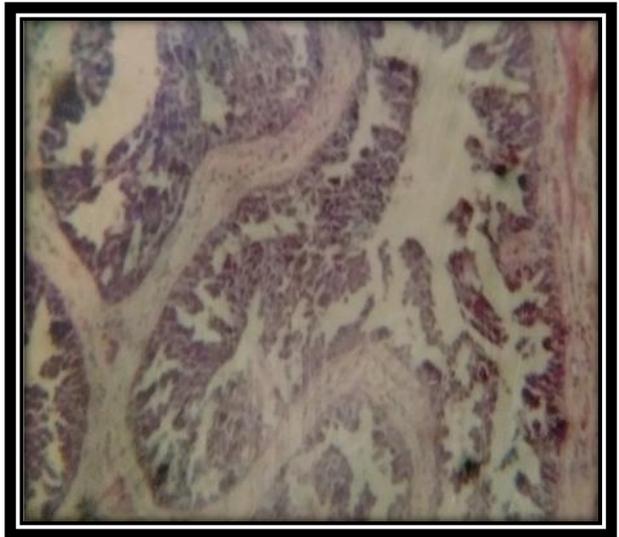
Tumour along with the urinary bladder



Urinary bladder along with both the ureters after tumor removal



Excised tumourous mass



Adenocarcinoma of prostate

HISTOPATHOLOGY

On histopathological examination, the prostatic tumour was confirmed as adenocarcinoma.

DISCUSSION

Excisional prostatectomy is used to treat cancer. This treatment is usually palliative, but it can be effective in

extending the patients normal life for several months because transitional cell carcinomas usually grow slowly (Bojrab *et al.* (1997) and Brum, 2015). Like present case, tumor of prostate gland causing adenocarcinoma in dogs and their successful surgical removal have been documented earlier (Teske *et al.* (2002) and Brum, 2015). For excisional prostatectomy, catheter are left for 1 week

and require protection with Elizabethan collars. (Johnston *et al.* 2000) also perform prostatectomy and catheter are left in place for 8-10 days. In present case antibiotic are continued for seven days and pain medications continued for three days along with antiseptic dressing from the surgical site. (Leroy and Northrup 2008) also recorded the same treatment. Although in the present case successful recovery was seen 10 days after surgery without any complications. And catheter was kept for 21 days. The dog is sounding well till today after a lapse of period of around 04 months.

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