Abstract

Aneleven year old castrated male Labrador retriever dog was brought to the hospital, with a history of recurrent urinary incontinence. Physical examination revealed no gross abnormalities. However, urinary catheter was not able to reach the bladder while trying for retrograde urinary catheterization. Rectal examination revealed, enlarged prostate. Abdominal radiography confirmed the case as prostate enlargement. Pre-operative blood collected for hematobiochemical analysis and thoracic radiograph was taken to rule out metastasis. Total prostatectomy was performed under general anaesthesia and bladder neck was reconstructed with pelvic urethra. Histopathological analysis of the excised Prostate gland mass was, confirmed as the prostateneoplasia. Post-operatively urinary bladder catheter was fixed, systemic antibi-otic and supportive therapy along with surgical wound dressing was continued for seven days. Urinary Catheter was removed on fifth post-operative day. The sutures were removed on 7th post-operative day after the complete healing and the animal made an uneventful recovery.

Key words: Total prostatectomy, Prostate tumour, Dog.

Prostatic diseases in male dogs are common and it has 3–10% of incidence in intact male dogs presented to veterinary surgeons. Prostatic hyperplasia and cysts are the commonly reported conditions whereas; prostatic abscesses and neoplasia are the rarely reported. Prostatic diseases were often difficult to distinguish by clinical signs. Additional diagnostic tools are needed for correct diagnosis and proper treatment (Levy et al., 2014).

Case History and Observations

Aneleven year old castrated male Labrador retriever dog was brought to the hospital, with a history of recurrent urinary incontinence and difficulty in passing stool. On further enquiry, it was confirmed that the dog was diagnosed with mild prostate gland enlargement by his previous veterinary doctor and treated both medically and surgically (castration) few months back. But as per owner, dog didnot show much of an improvement and the condition deteriorated over the time period. Physical examination revealed no abnormalities. When urinary catheterization was tried, catheter was not able to reach the bladder. Rectal examination revealed, enlarged prostate. The condition was tentatively diagnosed as Prostate enlargement. In the abdominal radiography, an enlarged prostate gland at the neck of the bladder was identified and the condition was confirmed as prostate enlargement (Fig.1). Pre operative haematology, serum analysis and thoracic radiography were done and the animal was found to be fit for anaesthesia. Surgery was fixed for prostatectomy.

Treatment and Discussion

Animal was premedicated with Inj. Diazepam @ 0.5mg/kg i.v and inj. Butorphanol @ 0.2mg/kg i.v. The ventral abdomen was shaved; scrubbed and prepuical wash was done with 7.5 per cent povidone iodine solution. Urinary catheter (infant feeding tube, size 7) was passed to protect the urinary passage. Anaesthetic induction
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was done using inj. Propofol @ 5mg/kg i.v. and maintained with constant infusion of Propofol done along with fluid therapy at the dose rate of 0.05 to 0.1mg/ Kg body weight per minute by mixing 25ml of inj. propofol in 475ml of inj. normal saline. The fluid rate was maintained with the help of flowmeter. After proper positioning and draping, a linear incision was made on the lower half of the abdomen, parallel to the midventral line, adjacent to the prepuce. After the blunt dissection of the subcutaneous tissues, a midline incision was made on the linea alba and the abdominal cavity was approached. Bladder was identified and averted in such a way the prostate gland was fully approachable (Fig.2). A total prostatectomy was performed along with urethra (Fig.3). After passing the urinary catheter in to the bladder, neck of the bladder was sutured with the pelvic urethra portion by 3/0 monofilament absorbable suture (Fig.4) Abdominal muscles were closed with 1 PGA by ford interlocking suture pattern. Subcutaneous tissue and skin apposed with 2/0 PGA and 2/0 polyamide respectively. Urinary catheter was fixed to the prepuce by 3/0 polyamide. Excised prostate gland was sent for histopathological analysis and the results confirmed it as the prostatic carcinoma (Fig. 5). Post-operatively urinary bladder catheter (Infant feeding tube size 9) was maintained, systemic antibiotic(inj. Ceftriaxone and Tazobactum® 22mg /kg/v sid), supportive therapies and surgical wound dress-

Fig. 1 Pre-operative radiograph showing enlarged prostate gland.

Fig. 2 Intra-operative picture showing prostate mass.

Fig. 3 Picture showing excised prostate gland.

Fig. 4 Intra-operative picture showing bladder attached with pelvic urethra.

Fig. 5. Picture showing histopathology slide stained with hematoxylin and eosin staining of the prostate adenocarcinoma.
ing with mupirocin ointment was continued for seven post operative days. Urinary Catheter was removed on fifth post operative day. The skin sutures were removed on 7th post-operative day after the complete healing and the animal made an uneventful recovery.

Canine prostate cancer is relatively rare condition in dogs. It accounts for less than 1% of all cancers diagnosed in dogs. Untreated animals usually have a poor prognosis (Stans 2020). Canine prostate cancers were treated with several treatment strategies like, Medical therapy, radiation therapy, and surgery (Castration, total and partial prostatectomy) (Griffin et al., 2018). Prostatic cancers can develop in the dogs castrated before and after onset of puberty. It occurs independently of testicular androgenic influence in the dog. The fact that castration appears to have no sparing effect on the risk of development of prostatic cancer raises important questions about the endocrine-related nature of the tumour in the dog (Obradovich et al., 1987).

Summary
A case of prostatic carcinoma was successfully treated, surgically by total prostatectomy and bladder neck reconstruction.

References