

## PROSTATIC ADENOCARCINOMA IN DOG; A CASE REPORT

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### ABSTRACT

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A case of Prostatic Adenocarcinoma in a dog was reported.

**Key words:** Prostate, Adenocarcinoma, Dog

### INTRODUCTION

Neoplastic conditions of the prostate are very rare in occurrence, among which, Prostatic adenocarcinoma (PAC) has been reported to be the commonest. This article reports a case of prostatic adenocarcinoma and the methods employed for arriving at the diagnosis.

### CLINICAL HISTORY AND OBSERVATIONS

A 13 year old intact Dobermann was presented with the history of persistent constipation for the past one month. According to the owner, it was having selective feeding habits, and was losing body condition over a prolonged period of time. It was also reported that the animal had difficulty in voiding urine and the occasional void was bloody in nature. Clinical examination of the animal revealed that the animal was dehydrated, with a normal temperature.

The animal was catheterised and the urine, which was sanguineous in nature, was removed. A complete blood count and blood serum examination revealed a total Leucocyte count of 13,000 cells/ml, Hemoglobin level of 14.4 g/dl, Creatinine of 2.4 IU and Alanine Transaminase of 48 units. Urine examination revealed a specific gravity of 1.015, pH of 6.5 and presence of WBC's on microscopic examination. A digital rectal examination was performed to evaluate the prostate gland and it was found that the prostate was intra-abdominal in position, assymetrical, hard in consistency, immobile and the animal showed no pain on palpation of the prostate. An ultrasound examination of the prostate revealed that, the prostate had a highly thickened capsule and an irregular contour with the parenchyma exhibiting abnormal hyperechogenic areas (Fig 2). The prostatic fluid was collected by prostatic wash method as reported by Kustritz (2006). The

prostatic fluid was cloudy on gross appearance and the sample was submitted for cytological examination, which revealed the presence of neoplastic cells.

### TREATMENT AND DISCUSSION

Since no effective treatment is available for neoplastic conditions of the prostate, the animal was euthanized. Post mortem examination revealed a grossly enlarged prostate gland with small para prostatic cysts on its surface (Fig 1). A tissue sample was sent for histopathological examination, which reported that there was evidence of adenocarcinoma.

Neoplastic conditions of the prostate gland have a reported incidence rate of 0.2-0.6 per cent (Bell *et al.*, 1991) and 5-7 per cent (Memon, 2007). Adenocarcinoma is the most common prostatic neoplasia followed by locally invasive transitional cell carcinoma. Prostatic adenocarcinoma tends to metastasize to the iliac lymph nodes, urinary bladder, rectum, lung, pelvic musculature and bone. Bell *et al.*, (1991) reported an 80 per cent chance of metastasis to other tissues and that it is more likely in castrated dogs and that pulmonary metastasis were more common. Clinical signs reported by Kraweik and Heflin (1992), Cornell *et al.* (1997) and Kraft *et al.* (2008) were tenesmus, hematuria, weight loss, stranguria, dysuria, hindlimb weakness, lameness and pain and the latter opined that bone metastasis leading to myelopathy or lameness was the initial clinical manifestation of malignancy. The systemic signs would mostly be that of a debilitation syndrome. Smith (2008) reported that any time a palpable prostate is found on a transrectal exam in a castrated male, one should be suspicious of prostatic neoplasia which showed diffuse hyperechoic areas, suggestive of mineralization ultrasonographically. Treatment of neoplastic conditions of the prostate is

deemed unrewarding (Parry, 2007) even by androgen deprivation. Castration results in involution of the non-neoplastic portions of the prostate, but does not affect the progression of the disease (Johnston et al., 2000). Methods like surgical prostatectomy can be tried, but may result in urinary incontinence.

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Fig 1: Gross appearance of prostate gland (asterix) with urinary bladder situated above.



Fig 2: Ultrasonographic appearance of the neoplastic prostate