DIAGNOSIS OF PROSTATIC DISEASES IN DOGS

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ABSTRACT

The study outlines the various diagnostic procedures employed in diagnosis of prostatic diseases in dogs. Disorders of the prostate have a definite presence in old dogs and a cursory screening for the disease is mandatory when a suggestive clinical sign is noticed.

Key words: Diagnosis, Prostatic Disease, Dogs

Routine diagnosis of prostatic disease is based on clinical signs. However, the Veterinary Physician may also employ a variety of techniques such as rectal palpation, ultrasonic imaging of the prostate and examination of prostatic fluid for confirmatory diagnosis, which is of paramount importance in planning the course of treatment.

The data pertaining to the present investigation were generated following screening of all the male dogs aged over five years which were presented to the Out Patient Department of Veterinary College Hospital, Hebbal, Bangalore during the period between November 2007 and April 2008. On presentation of the case with a clinical history suggestive of prostatic disease, a detailed clinical history of the dog was collected regarding duration of the illness, appetite, gait abnormalities, presence or absence of constipation and dysuria and the colour of urine. A detailed clinical examination was also made, where the temperature, presence or absence of prepucial discharges, hydration status, gait abnormalities, pain on palpation of the caudal abdomen and the general body condition was evaluated.

Dogs exhibiting clinical signs of prostatic disease were examined by rectal palpation to evaluate the location, consistency, symmetry, mobility and presence of pain on palpation of the prostate. Dogs exhibiting clinical signs of prostatic disease, with rectal examination findings were subjected to ultrasonographic examination in transverse and longitudinal planes using a 5 to 7.5 MHz transabdominal probe (Honda Electronics HS-2000vet®) for evaluating the capsule and parenchyma of the prostate gland. Further, gross and cytologic evaluation of the prostatic fluid was performed in all suspected cases of prostatic disorders. Prostatic fluid was obtained either by ejaculation or by prostatic wash.

In the present study, on per rectal digital palpation, it was found that the position of the prostate gland in 53.3 and 33.3% dogs respectively was in the abdominal cavity and positioned partly in the pelvic cavity and partly in the abdominal cavity, whereas the prostate gland in 13.3% dogs were intrapelvic. However, the prostate gland has been reported to be intraabdominal even in senile dogs due to progressive hyperplasia with the advancing age (Gordon, 1961; Evans and Christensen, 1993). The present investigation also confirms that an intraabdominal location may not necessarily be a sign of prostatic disease unless associated with other clinical signs. The consistency of the prostate is reported as smooth and firm in nature (Paclikova *et al,* 2006; Kutzler and Yeager, 2005) and hence an altered consistency of the prostate gland on rectal palpation is a fairly reliable sign of prostatic disease. In the present study, in affected dogs, the consistency of the prostate was found to be hard (66.7%), smooth and firm (normal) (20.0%) and soft (13.3%). Dissimilarity in the lobes of the prostate gland has been observed as an important sign of prostatic disease by Rogers *et al,* (1988), Johnston *et al,* (2000), Barsanti and Finco (1989) and Davidson (2003). In the present study, 73.3% and 26.7% of the diseased Dogs had an asymmetrical and symmetric prostate gland respectively. A normal prostate gland is reported to be freely movable when palpated per rectum (Kraweik and Heflin, 1992). The lack of mobility of the prostate gland has also been cited as one of the sign of prostatic disease (Kutzler and Yeager, 2005). However, in the present study, prostate gland was found fixed in 53.3% of the cases and mobile in the remaining 46.7% dogs upon digital per rectal examination. Present observations suggest that the absence of mobility alone cannot be taken as a criterion for diagnosing prostatic disease. Pain on palpation was present in only 13.3% of the dogs, whereas it was absent in the remaining

86.7% cases. Pain that the animal exhibits when prostate is palpated has been reported to be an important sign of acute prostatitis or neoplasia (Kraweik and Heflin, 1992 and Kutzler and Yeager, 2005).

Ultrasonographic study was also conducted, a normal and echogenic capsule was visualised in 46.7% of the diseased dogs, whereas 26.7% dogs each had a thickened or irregular capsule. Presence of hypoechoic areas of various sizes (cyst/abscess) in the moderately hyperechoic parenchyma of the gland was detected in 73.3% of the cases and 26.7% dogs were having normal moderately hyperechoic parenchyma. The findings of the study suggest that altered echogenecity, regularity and thickness are a definite evidence of prostatic disease. This observation is also encountered in many of the prostatic diseases, which is quite in accordance with reports of Feeney *et al.* (1985), Feeney and Johnston, (1986), Johnston *et al.* (2000) and Davidson (2003). In the present investigation the prostatic parenchyma revealed multiple anechoic/hypoechoic areas, suggestive of prostatic cyst/ abscess in majority of the dogs. However, ultrasonically it would be difficult to identify these cases specifically as either a cyst or an abscess as the ultrasonic picture in both cases is similar. Under these circumstances, it becomes pertinent to exploit the value of cytological evaluation of the prostatic fluid and other clinical signs such as fever, depression, anorexia, caudal abdominal pain (abscess).

Out of the 15 positive cases of prostatic disorders, nine dogs were subjected to digital manipulation of the penis to obtain the third fraction of the semen and in the remaining six dogs the prostatic wash was collected by massage technique. Prostatic fluid was clear in 66.6% of the diseased dogs, hemorrhagic in 20.0% and purulent in the remaining 13.3%. Presence of RBC's was the commonest feature seen in 53.3% of the dogs, followed by evidence of WBC's in 40.0% of the affected dogs. Evidence of neoplastic cells was detected in 6.7% of the diseased dogs. On cytological examination of the prostatic fluid, WBC's may be seen even in dogs with a normal prostate gland and cannot be used as sole criteria to diagnose the case as prostatitis (acute/ chronic). Occasional RBC, WBC, and squamous epithelial cell are present in the prostatic fraction of the normal male. Presence of large numbers of erythrocytes indicates recent haemorrhage, whereas a large number of leukocytes indicate inflammation (Smith, 2008 & Kutzler and Yeager, 2005). Neoplastic cells were identified on prostatic fluid cytological examination in one animal and the owner desired euthanasia. Subsequent post-mortem examination and histopathological studies confirmed the prostatic disorder to be a case of adenocarcinoma.

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