

STUDY OF CLINICAL SIGNS AND CHANGES OF PROSTATE HYPERPLASIA IN DOGS

S.I. Yesambare^{1*}, M.S. Bawaskar², S.K. Sahatpure³, A.P. Gawande⁴ and D.V. Patil²

¹M.V.Sc. Student, ²Assistant Professor, ³Associate Professor and Incharge, ⁴Associate Professor; Department of Animal Reproduction, Gynaecology & Obstetrics, Nagpur Veterinary College, Nagpur, Maharashtra Animal and Fishery Sciences University, Nagpur, Maharashtra, India.

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The present study was carried out at Veterinary Clinical Complex, Nagpur Veterinary College, Maharashtra Animal and Fishery Sciences University, Nagpur. Twenty four male dogs of more than five years of age irrespective of breeds with clinical signs suggestive of prostatic disorders were screened for prostatic hyperplasia with the help of history, clinical examination, digital rectal palpation. In group I (5 to 7years age) out of 12, eight dogs (66.6 %) diagnosed with prostate gland hyperplasia exhibited the clinical signs of sanguineous fluid dripping from the tip of the urethra. Common clinical sign observed i.e straining during urination or difficult urination was observed in 50% cases, haematuria in 41.66, constipation in 33.33%. Vomition signs were observed in 40 % and less common sign i.e stiff gait was noticed in 8.30 per cent dogs. In group II (8 and above 8 years age) out of 12, ten dogs (83.30 %) diagnosed with prostate gland hyperplasia which exhibited the clinical signs of sanguineous fluid dripping from the tip of the urethra, followed by presence of blood in urine i.e hematuria in 50.00%, constipation and difficult urination in 50.00 % and 41.60% dogs, respectively, while stiff gait and vomition in 16.60 % dogs.

Keywords: Dogs, Prostate, Prostate hyperplasia.

The prostatic diseases is age-related alteration in pathology and physiology of the prostate gland results in an increase in numbers of both epithelial cell size and epithelial cell numbers is prone to the other infectious conditions. Mostly dogs affected from prostatic diseases are asymptomatic and difficult to diagnose. The hyperplastic prostate is highly vascularized and therefore the gland bleeds easily, which explains the common clinical signs like continues dripping blood from the tip of the penis or blood tinged urine, dripping of serous to sanguineous urethral discharge, haematuria, difficulty in urination, hemospermia, rectal tenesmus, constipation, “stiffed-legged” gait, occasional vomiting, continuous straining during defecation may cause perineal hernia in dogs. The diagnosis of the prostate hyperplasia can be made by the history, clinical signs, physical examination, biochemical estimation and ultrasound method. The least invasive and most convenient method for the early detection of

benign prostate hyperplasia is digital rectal examination (DRE) which is the best method for physical examination of the prostate gland. The present study was designed to study the clinical signs and changes in prostate hyperplasia by digital rectal palpation as most of the dogs affected with prostatic diseases are asymptomatic and difficult to diagnose.

Materials and Methods

Twenty four male dogs with 5 year or more were selected for the said study reported at Veterinary Clinical Complex, Nagpur irrespective of breeds. All reported cases suggestive of prostate hyperplasia were incorporated in the study. The dogs were clinically examined by Digital Rectal Examination for the enlargement of prostate gland and signs observed and analyzed.

Results and Discussion

Clinical signs of prostate hyperplasia

The clinical signs observed in the male dogs affected with prostate gland hyperplasia

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were fluid dripping from the urethra, haematuria, constipation, difficult urination, stiff leg gait appearance and vomiting. Due to enlargement of prostate gland, the enlarged and hyperplastic prostate causes the blood dripping from tip of penis and it expands to the rectal canal which results in tenesmus condition and constipation. Prostatic fluid

discharge with foul smell from the tip of penis is due to the urine retention as result of pressure of enlarged prostate. Vomition might develop due to the renal affections secondary to prostatitis. Stiff-legged gait occur due to the enlargement of prostate gland which causes the discomfort while walking exhibits the wide gait in hind limbs.

Table.1. Clinical signs observed in male dogs with enlarged prostate (n=24)

Clinical signs	Group I 5 to 8 yearsage(n=12)	Group II >8 years(n=12)	Overall (n=24)
Urethral discharge	8 (66.66%)	10 (83.33%)	18 (75.00%)
Haematuria	5 (41.66%)	6 (50.00%)	11 (45.83%)
Constipation	4 (33.33%)	6 (50.00%)	10 (41.66%)
Difficult Urination	6 (50.00%)	5 (41.66%)	11 (45.83%)
Stiff Legged Gait	1 (8.30%)	2 (16.60%)	3 (12.50%)
Vomitions	4 (33.33%)	2 (16.60%)	6 (25.00%)

In present study in group I (5 to 7years age), out of 12, eight dogs (66.6 %) diagnosed with prostate gland hyperplasia exhibited the clinical signs of sanguineous fluid dripping from the tip of the urethra. Common clinical signs observed i.e straining during urination or difficult urination in 6 (50%) cases, haematuria in 5 (41.66%), constipation in 4 (33.33%) dogs. Vomition sign was observed in 4 (40 %) and less common sign i.e stiff gait was noticed in only one (8.30%) dog (Table 1).

In group II (8 and above years age) out of 12, ten dogs (83.30 %) diagnosed with prostate gland hyperplasia exhibited the clinical signs of sanguineous fluid dripping from the tip of the urethra, followed by presence of blood in urine i.e. hematuria in six (50.00%), constipation and difficult urination in six (50.00 %) and five (41.60%) respectively, while stiff gait in two (16.60%) and vomition observed in two (16.60 %) dogs which are less common signs (Table 1).

The present findings are in accordance with Thakur, 2016, who reported in seven dogs diagnosed with benign prostatic hyperplasia with prostatitis where the most common clinical signs noted were sanguineous fluid dripping from the tip of

urethra, hematuria and constipation with the highest percentage of 85.71 % each. Similar observations with the clinical signs of sanguineous fluid discharge were also reported by Cunto *et al.*, 2019. In contrast with the present study, Selvaraj *et al.*, 2015, reported hematuria, difficult urination and vomiting as the chief clinical signs of prostatitis where sanguineous fluid dripping from the tip of urethra was considered as the least observed clinical signs or mainly associated with chronic prostatitis. Enlargements of prostate generates pain and rectal and urethral passage firmness or compression causes difficulty in urination as well as defecation. The other less common clinical signs observed are stiff leg gait and vomiting occurs as a result of secondary to affections of prostate gland. Likewise prostate gland swelling and pain in pelvis leads to stiff legged gait.

Digital rectal palpation of prostate gland

Digital rectal examination (DRE) is the physical examination of prostate gland done by per rectal method. The normal prostate in dogs appears oval to spherical in shape with smooth surface area and symmetrical without evidence of pain.

Table.2 Digital Rectal Palpation findings in dogs with prostate gland hyperplasia (n=24)

Sr. No.	Physical parameters	Normal prostate gland	Prostate gland changes	No of male dogs (n=24)	Percentage of affected dogs (%)
1	Shape	Walnut or oval to spherical.	Irregular shape	24	100
2	Symmetry	symmetrical	Asymmetrical	15	62.50
3	Surface contour	smooth	Rough	8	33.33
4	Movability	Movable freely	Not movable	16	66.66
5	Evidence of pain	Not pain during palpation	Pain on palpation	13	54.16

In present study, digital rectal examination was carried out for the evaluation of the prostate gland to assess its physical parameters like shape, size, symmetry, surface counter, move ability and evidence of pain on palpation. Table 2 showed that, during this palpation technique all of the selected cases of twenty-four dogs (100 %) had abnormal prostate shape with mild to severe enlargement of the gland. The various shapes of prostate was palpated and observed during present study, such as irregular shape, walnut shaped, and ovoid to spherical, in which the most the dogs were observed with irregular prostate. Out of 24 evaluated male dogs, the position of prostate gland was palpated fixed in 16 (66.66 %) while in 15 (62.50 %) showed asymmetrical prostate gland. Out of 24, 13 (54.16 %) were having pain on palpation. On perusal of table2 also revealed that the surface contour of prostate gland was found rough in 8 (33.33%) dogs. In accordance with the present findings, Das *et al.*, 2017, reported the findings and stated that pain on palpation of enlarged prostate gland in Prostate hyperplasia due to increased pressure on nerve ending and due to acute prostatitis. In contrast with present findings Levy *et al.*, 2014, stated that prostate becomes difficult to palpable per rectally unless prostatomegaly is severe enough to cause repositioning cranially into the abdomen cavity. The present study showed that dogs diagnosed and found affected with prostate gland

hyperplasia on digital rectal palpation found enlarged with irregular shape and size, asymmetrical with rough surface contour and with a fixed position that means not movable as well as evidence of pain might be observed during digital rectal palpation.

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