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Research Article

Prevalence of Clinical Diseases and Disorders of Goat at Upazilla Veterinary Hospital, Pirojpur, Bangladesh

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ABSTRACT

Objective: In this study, prevalence of clinical diseases and disorders of goat at upazilla veterinary hospital, Pirojpur, Bangladesh were calculated and analyzed based on age, sex and seasonal variation during the period from June, 2014 to May, 2015.

Materials and Methods: The protocol of disease diagnosis was mainly based on clinical sings, physical examination and some common laboratory techniques. Total 277 clinical cases (diseases and disorders) of goat were recorded for this study.

Results: The prevalence of medicinal, surgical and gynecological cases were 47.29%, 41.16% and 11.55%; respectively. In medicinal cases, prevalence of diarrhea was highest (22.90%) compare to bloat (13.74%), peste-des-petites ruminant (13.74%), shipping fever (12.98%), fever (11.45%), conjunctivitis (11.45%), mite infestation (10.69%) and tetanus (3.05%). Female (63.36%) and older goat (54.20%) were more susceptible to different types of medicinal cases. In surgical cases, prevalence of castration was highest (52.63%) compare to abscess (17.54%), dog bite (16.67%) and foot rot (13.16%). Summer season represented highest surgical case (49.12%) prevalence followed by winter season (33.33%) and rainy season (17.54%). In gynecological cases, prevalence of retained placenta was highest (37.50%) compare to vaginal prolapsed (31.25%) and dystocia (31.25%). Seasonal variation was also observed in gynecological cases and summer season (50%) represented highest case prevalence followed by winter season (37.5%) and rainy season (12.50%).

Conclusion: Those prevalence of different diseases and disorders of goat will helpful for clinician to know the disease occurrence according to goat's age, sex and seasonal variation in this area and will help them to take proper preventive measures against those diseases and disorders.

Keywords: Prevalence, diseases and disorders, upazilla veterinary hospital, goat

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INTRODUCTION

Goat is very important small sized livestock animal in Bangladesh. There are about 14.8 million goats present in Bangladesh (DLS, 2015). Goat rearing becomes more popular business in Bangladesh and more people are engaged with this business which is contributing significantly to Bangladesh economy. Sometimes the productivity of goat becomes less due to different diseases and disorders, poor nutrition, poor breeding policy and poor management (Rahman et al., 1995). The common diseases and disorders that affect the productivity of goat are diarrhea, peste-des-petites ruminant, shipping fever, fever, conjunctivitis, mite infestation, tetanus, foot rot and so on. Upazilla veterinary hospital is the source of information of diseases and disorders that occurred in different livestock animal like cattle, sheep, and goat as they used to record the diseases and disorders of animals. It represents the health and diseases prevalence of a livestock animal of a particular area. Several studies were carried out on the prevalence of disease and disorders of small livestock animals like sheep or goat from different upazilla veterinary hospital of Bangladesh (Rahman et al., 2012; Samad et al., 2001; Pharo, 1987; Kabir et al., 2010; Karim et al., 2014) but no study was undertaken at Pirojpur, Bangladesh .Here the study is planned to execute the prevalence of disease and disorders of goats to provide good knowledge for clinician in order to know the pattern of disease occurrence according to the goat's age, sex and seasonal variation and help them to take proper preventive measures against those diseases and disorders.

MATERIALS AND METHODS

Study area and duration:

The study was conducted at Upazilla Veterinary Hospital, Pirojpur, Bangladesh from the period of June, 2014 to May, 2015. Some common laboratory techniques for disease diagnosis were performed at the laboratory of Upazilla Veterinary Hospital, Pirojpur, Bangladesh.

Study population:

Total 277 clinical cases (diseases and disorders) of goat were recorded, in which 135 were male and 142 were female goats. They are divided into two aged group – 0-2 years age (149 goats) and 3-5 years age (128 goats).

Diagnosis of diseases:

The diseases and disorders were diagnosed mainly based on clinical sings, physical examination and some common laboratory techniques.

Data collection, Processing and Prevalence calculation:

Data of 277 clinical cases (diseases and disorders) of goat were recorded. Those clinical cases were divided into three types on the basis of their treatment - medicinal case (131 goats), surgical cases (114 goats) and gynecological cases (32 goats). According to sex, the diseased animal were divided into male (135 goats) and female (142 goats). Duration of the study was divided into three seasons and the numbers of diseased animal were 94, 105, and 78 in winter, summer and rainy season, respectively. All the data were calculated with the help of MS Excel 2010, STATA SE 13 to determine the prevalence of different diseases and disorders of goats.

RESULTS AND DISCUSSION

Prevalence of clinical diseases and disorders of goat at upazilla veterinary hospital, Pirojpur, Bangladesh is given bellow (Table 1)

In this study, the prevalence was highest in medicinal case (47.29%) followed by surgical cases (41.16%) and gynecological cases (11.55%). This observation supports the earlier report of Rahman et al. (2012); Samad (2001).

Medicinal cases:

In medicinal cases, prevalence of diarrhea was highest (22.90%) compare to bloat (13.74%), peste-des-petites ruminant (13.74%), shipping fever (12.98%), fever (11.45%), conjunctivitis (11.45%), mite infestation (10.69%) and tetanus (3.05%). Female (63.36%) and older goat (54.20%) were more susceptible to different types of medicinal cases in Table I.

Diarrhea was major common disorders of goat. Prevalence was more in female (15.27%) goat than male goat (7.63%) which was similar with the findings of Lucky et al., (2016). Young goats (13.74%) were more susceptible to diarrhea than the older goat (9.16%). In winter, prevalence of diarrhea is more (9.16%) compare to rainy (7.63%) and summer season (6.11%) which has little variation with the study of Rahman et al., (2012) and Samad, (2001).

Bloat was another common disorder of goat at upazilla veterinary hospital, Pirojpur, Bangladesh. The prevalence of bloat was 13.74% which support the earlier report of Rahman et al. (2012) and Samad, (2001). Female represented highest prevalence (9.16%) than the male goat (4.58%). Older goats were more susceptible (11.45%) to bloat than younger goat (2.29%). In rainy season, prevalence is highest (8.40%) followed by winter (3.82%) and summer season (1.53%) which was almost similar with the

findings of Lucky et al., (2016).

The prevalence of peste-des-petites ruminant of goat was 13.74%. Female showed more prevalence (9.16%) than male goat (4.58%). Younger goats were more susceptible (7.63%) to peste-des-petites ruminant than the older (6.11%). In summer season

The prevalence of conjunctivitis was also11.45%. Prevalence was highest in older goats (6.87%) than younger goats (4.58%). In rainy season, prevalence was more (5.34%) compare to summer (3.82%) and winter season (2.29%). Those findings were similar with the findings of Rahman et al., (2012).

Diseases and Disorders of Goats	Number of Goats	Male Goats	Female Goats	0-2 Years age	3-5 Years age	Winter Season	Summer Season	Rainy Season
Medicinal Cases	**131 (47.29%)**	**48 (36.64%)**	**83 (63.36%)**	**60 (45.80%)**	**71 (54.20%)**	**44 (33.59%)**	**33 (25.19%)**	**54 (41.22%)**
Mite infestation	14 (10.69%)	8 (6.11%)	7 (5.34%)	4 (3.05%)	10 (7.63%)	8 (6.11%)	4 (3.05%)	2 (1.53%)
Peste-des-petites ruminant	18 (13.74%)	6 (4.58%)	12 (9.16%)	10 (7.63%)	8 (6.11%)	6 (4.58%)	8 (6.11%)	4(3.05%)
Shipping fever	17 (12.98%)	6 (4.58%)	11 (8.40%)	7 (5.34%)	10 (7.63%)	5 (3.82%)	2 (1.53%)	10 (7.63%)
Tetanus	4 (3.05%)	1 (0.76%)	3 (2.29%)	3 (2.29%)	1 (0.76%)	1 (0.76%)	2 (1.53%)	1 (0.76%)
Fever	15 (11.45%)	7 (5.34%)	8 (6.11%)	9 (6.87%)	6 (4.58%)	4 (3.05%)	2 (1.53%)	9 (6.87%)
Diarrhea	30 (22.90%)	10 (7.63%)	20 (15.27%)	18 (13.74%)	12 (9.16%)	12 (9.16%)	8 (6.11%)	10 (7.63%)
Bloat	18 (13.74%)	6 (4.58%)	12 (9.16%)	3 (2.29%)	15 (11.45%)	5 (3.82%)	2 (1.53%)	11 (8.40%)
Conjunctivitis	15 (11.45%)	5 (3.82%)	10 (7.63%)	6 (4.58%)	9 (6.87%)	3 (2.29%)	5 (3.82%)	7 (5.34%)
Surgical Cases	**114 (41.16%)**	**87 (76.32%)**	**27 (23.68%)**	**89 (78.07%)**	**25 (21.93%)**	**38 (33.33%)**	**56 (49.12%)**	**20 (17.54%)**
Dog bite	19 (16.67%)	10 (8.77%)	9 (7.89%)	12 (10.53%)	7 (6.14%)	6 (5.23%)	10 (8.77%)	3 (2.63%)
Abscess	20 (17.54%)	12 (10.53%)	8 (7.02%)	14 (12.28%)	6 (5.23%)	10 (8.77%)	7 (6.14%)	3 (2.63%)
Castration	60 (52.63%)	60 (52.63%)	-	60 (52.63%)	-	18 (15.79%)	30 (26.32%)	12 (10.53%)
Foot rot	15 (13.16%)	5 (4.39%)	10 (8.77%)	3 (2.63%)	12 (10.53%)	4 (3.51%)	9 (7.89%)	2 (1.75%)
Gynecological Cases	**32 (11.55%)**	**-**	**32**	**-**	**32**	**12 (37.5%)**	**16 (50%)**	**4 (12.5%)**
Vaginal prolapse	10 (31.25%)	-	10 (31.25%)	-	10 (31.25%)	6 (18.75%)	3 (9.38%)	1 (3.13%)
Retained placenta	12 (37.5%)	-	12 (37.5%)	-	12 (37.5%)	4 (12.5%)	6 (18.75%)	2 (6.25%)
Dystocia	10 (31.25%)	-	10 (31.25%)	-	10 (31.25%)	2 (6.25%)	7 (21.88%)	1 (3.13%)
Total	**277**	135	142	149	128	94	105	78

Table 1: Prevalence of clinical diseases and disorders of goat at upazilla veterinary hospital, Pirojpur, Bangladesh

prevalence was highest (6.11%) followed by winter (4.58%) and rainy season (3.05%). Those findings were almost similar with the findings Lucky et al., (2016).

The prevalence of shipping fever was 12.98% in which female goat was more porn (8.40%) to shipping fever than male (4.58%). Older goats were more susceptible (7.63%) than younger (5.34%). In rainy season, prevalence was highest (7.63%) compare to winter (3.82%) and summer season (1.53%). Those findings were almost similar with the findings of Pharo (1987); Hoque and Samad, (1997).

The prevalence of fever was 11.45%. Younger goats were more susceptible (6.87%) than the older goats (4.58%). In rainy season, the prevalence was highest (6.87%) compare to winter (3.05%) and summer season (1.53%). Those findings were similar with the findings of Lucky et al., (2016); Pharo (1987); Hoque and Samad, (1997).

The prevalence of mite infestation was 10.69%. Female goats showed more prevalence (6.11%) followed by male goats (5.34%). Older goats were more susceptible (7.63%) than younger goats 3.05%. In winter season, prevalence was highest (6.11%) compare to summer (3.05%) and rainy season (1.53%). Those findings were similar with the findings of Lucky et al., (2016); Rahman et al., (2012).

The prevalence of tetanus was 3.05%. Female goats represented more prevalence (2.29%) than male goat (0.76%). Younger goats were more susceptible (2.29%) than the older goats (0.76%). In summer season the prevalence was highest (1.53%) compare to winter (0.76%) and rainy season (0.76%).

Surgical cases:

In surgical cases, prevalence of castration was highest (52.63%) compare to abscess (17.54%), dog bite (16.67%) and foot rot (13.16%). Summer season

represented highest surgical case (49.12%) prevalence followed by winter season (33.33%) and rainy season (17.54%) in Table I.

In summer season, the prevalence of castration of goat was highest (26.32%) compare to winter (15.79%) and rainy season (10.53%) which was similar with the findings of Rahman et al. (2012).

The prevalence of abscess was 17.54% in which male showed more prevalence (10.53%) than the female goats (7.02%). Younger goats were more susceptible (12.28%) than the older goats (5.23%). In winter season, prevalence was highest (8.77%) compare to summer (6.14%) and rainy season (2.63%). Those findings were similar with the findings of Lucky et al., (2016); Rahman et al., (2012); Hossain et al. (1986).

The prevalence of dog bite was 16.67% in which male represented more prevalence (8.77%) than female goats (7.89%). Younger goats showed highest (10.53%) prevalence than older goats (6.14%). In summer season, the prevalence is highest (8.77%) compare to winter (5.23%) and rainy season (2.63%). Those findings were similar with the findings of Rahman et al., (2012).

The prevalence of foot rot was 13.16%. Female goats showed more prevalence (8.77%) than male goats (4.39%). Older goats were more susceptible (10.53%) than younger goats (2.63%). In summer season, the prevalence was highest (7.89%) compare to winter (3.51%) and rainy season (1.75%). Those findings were similar with the findings of Lucky et al., (2016); Rahman et al., (2012).

Gynecological cases:

In gynecological cases, prevalence of retained placenta was highest (37.50%) compare to vaginal prolapsed (31.25%) and dystocia (31.25%). Seasonal variation was also observed in gynecological cases and summer season (50%) represented highest case prevalence followed by winter season (37.5%) and rainy season (12.50%) in Table I.

The prevalence of retained placenta was highest (37.50%) which was support the earlier report of Rahman et al., (2012); Karim et al., (2014). In summer season, the prevalence was highest (18.75%) followed by winter (12.5%) and rainy season (6.25%). Those findings were similar with the findings of Lucky et al., (2016); Rahman et al., (2012); Hossain et al. (1986).

The prevalence of vaginal prolapsed was 31.25%. In winter season, the prevalence was highest (18.75%) compare to summer (9.38%) and rainy season (3.13%). Those findings were similar with the findings of Lucky et al., (2016); Rahman et al., (2012).

The prevalence of dystocia was 31.25%. In summer season, prevalence was highest (21.88%) followed by winter (6.25%) and rainy (3.13%). Those findings were almost similar with the findings of Lucky et al., (2016); Rahman et al., (2012).

Conclusion

The prevalence of different diseases and disorders of goats at Upazilla Veterinary Hospital, Pirojpur, Bangladesh will be helpful for clinician to enrich their know about the disease occurrence and distribution pattern according to goat's age, sex and seasonal variation in this area. And thus, they will take proper preventive measures against those diseases and disorders of goats.

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Authors' Contribution:

Tuli Dey, planned and wrote manuscript, Sonnet Poddar, collected and analyzed data, Jabin Sultana and Salma Akter helped in writing the manuscript. Bibek Chandra Sutradhar supervised during this work.

Conflict of interest:

All authors declared that there is no conflict of interest regarding this study.

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