

**OCCURENCE OF VARIOUS DISEASES OF LIVESTOCK
AT BELABO UPAZILLA OF NARSINGDI DISTRICT IN
BANGLADESH**



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Khulshi, Chittagong-4225

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BANGLADESH**



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PLAGIARISM CERTIFICATE

I, Shadkuzzaman Rakib, would like to strongly assure you that I have performed all works furnished here in this report. The information has been collected from different books, national and international journals, websites and references. All the references have been acknowledged duly.

Therefore, I reserve entire responsibility of this report.

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Author

September, 2018

LIST OF ABBREVIATIONS

Abbreviations	Elaborations
ULO	Upazilla Livestock Officer
VS	Veterinary Surgeon
LEO	Livestock Extension Officer
GDP	Gross Domestic Product
DLS	Department of livestock services
PPR	Peste Des Petits Ruminants
FMD	Foot and Mouth Disease
BQ	Black Quarter

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ABSTRACT

The present study was conducted to determine the clinical prevalence of diseases and disorders in cattle and goats at Belabo Upazilla Veterinary Hospital, Narsingdi during February to March, 2018. Total cases were 252, among them cattle were 131(51.98%) and goats were 121(48.12%). Diagnosis was done on the basis of clinical history, clinical examination and microscopic examination. Clinical examinations detected 26 different types of diseases and disorders in 131 cattle, where highest prevalence of fascioliasis 28(21.37%) and lowest in milk fever 1(0.76%) were recorded. Age wise prevalence in calves (<6 months), middle aged (6months - 2 years) and adult cattle(>2 years) were 16(12.21%), 79(60.3%) and 36(27.48%), respectively. Sex wise prevalence in male and female cattle were 71(54.11%) and 60(45.8%), respectively. In 121 goats, 22 different types of digestive disorders were detected where highest prevalence of PPR was 22(18.18%) and lowest prevalence of tetanus was 1(0.83%). Age wise prevalence in kids (<6 months), middle aged (6months to 2 years) and adult goat (>2 years) were 40(33.05%), 67(55.37%) and 14(11.57%), respectively. Sex wise prevalence in male and female goats were 45(37.2%) and 76(62.8%), respectively. So it is concluded that, the knowledge of proper husbandry, awareness of vaccination and practices of proper hygienic management is mandatory to reduce the frequency of different diseases for maintaining the productivity.

Key words: Prevalence, age, sex

CHAPTER 1

INTRODUCTION

Bangladesh is a densely populated agricultural country 80 percent of the people are living in the rural area. Among all the people 80% of them related to agriculture. Now, 20% of our people are directly connected to commercial livestock farm as their earning support. In case of GDP (Gross Domestic Product) about 2.6 % is contributed from livestock in Bangladesh (Anon, 2010). In Bangladesh at present, there are about 22.90 million cattle 1.26 million buffaloes, 21.56 million goats, 2.78 million sheep, 212.47 million chickens, 39.84 million duck in our country (DLS, 2009). But different kinds of diseases are the main obstruction in the development of our livestock. As a result it is causing the less production and sometimes death of many animals. (Afazuddin, 1985) estimated, TK. 1,08067.75 as an annual economic loss due to various parasitic diseases at Savar military farm. Among all the diseases parasitism is the main obstacle in livestock management (Jabber and Green, 1983).

Veterinary hospital is an ideal source of information of animal diseases with their appropriate treatment. People from the neighboring areas bring their sick animals to the Veterinary hospital every day. By analyzing the case records we can have a gross idea about the common diseases of surrounding areas.

Narsingdi district is one of the important sites for livestock population and most of the common livestock diseases are frequently found in this area. That's why this study was conducted at the Belabo Upazilla for two months during internship training program with the following objectives :

- i) To ascertain the cause of different diseases and disorders of livestock (cattle and goats).
- ii) To study the causes of those diseases.
- iii) To study the factors affecting the recovery from those disease.

CHAPTER 2

MATERIALS AND METHODS

The study was conducted at Belabo Upazilla Veterinary Hospital of Narsingdi district of Bangladesh to determine the general clinical prevalence of diseases and disorders in calves, cattle and goats. Study was conducted during the period of February, 2018 to March, 2018.

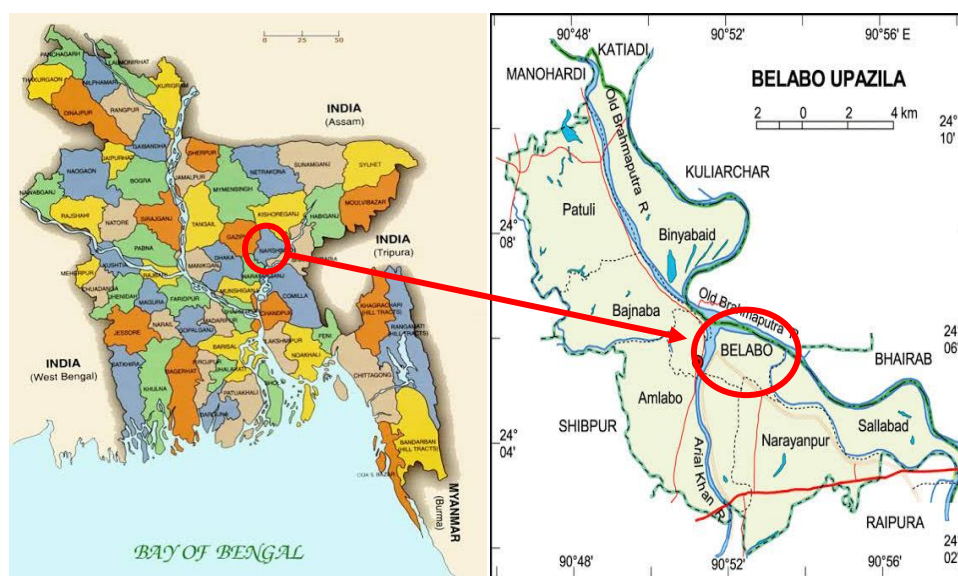
All the sick animals brought for the treatment to this hospital were registered at first in the registered book. The owners complain as well as animals descriptions were recorded in the registered book.

2.1 Reference population

The calves, cattle and goats that were brought in Belabo Upazilla Veterinary Hospital were considered to be reference population.

2.2 Source population

Villages and union under Belabo Upazilla with household raising at least one goat with history and clinical sign of diseases were considered to be the study population. Though, the cattle population was not so large in number but a lot of cattle affected by different diseases at the time of my internship program at Belabo Upazilla.



2.3

Figure 1: Location of Belabo Upazilla.

Study population

A total of 252 animal including 131 cattle and 121 goats were recorded during the period of this study.

2.4 Population and tools used for data collection

All the sick animals are brought for the treatment to this hospital were first registered in the patient registered book. There were two ways of to have attended patients; one was clinic at which farmers willingly came with the patients with their complaints and another was at field where Veterinary Surgeon along with me went to the field for registration of diseased animals. The age and other clinical history of sick animal were determined by asking the owner. A total of 252 animals including 131 cattle and 121 goats were available during the study period and the clinical examinations were conducted according to the merit of the cases. Materials considered significant for the diagnostic purposes were collected.

2.5 Clinical examination

Examination of body condition, temperature, feces and any prominent clinical signs were recorded. Based on these findings a presumptive diagnosis was made. Clinical examinations of all 131 cattle and 121 goats were conducted on the basis of diseases history, owner complaint, symptoms, to diagnose the following diseases and disorders. History of each case (present and past) was carefully taken which gave a guideline for examination of the animals. According the merit of the individual case, general clinical examination were conducted on the basis of disease history and owners complaint, symptoms and techniques such as microscopic examination, laboratory common techniques used by Rosenberger, 1979 and Samad *et al.*, 1988.

2.5.1 Fever

Fever was diagnosed on the basis of recorded rectal temperature (Blood and Radostits, 1989).

2.5.2 Anorexia

Anorexia syndrome were diagnosed on the basis owner's complaint with the history of partial and complete absence of appetite with varying decreased food intake and following the procedure of Prasad *et al.*, 1976.

2.5.3 Digestive disorders (diarrhea)

Fecal samples of the diarrheic selected animals were examined in the veterinary hospital, Belabo and those samples found negative on parasitological examination were diagnosed as diarrhea and also by taking history whether of regular anthelmintic treatment of this animals were practiced or not.

2.5.4 Respiratory disorders (pneumonia)

This disorder was diagnosed on the basis of owner's complaint and recording abnormal respiratory function like polypnoea, dyspnea, coughing, sneezing, nasal discharging, thoraco abdominal breathing etc. and by examining the entire respiratory tract as described by Blood and Radostits (1989).

2.5.5 Skin diseases

Different type discrete and diffuse skin lesions were diagnosed clinically by visual examination.

2.5.6 Corneal opacity

Corneal opacity was diagnosed on examination. The presence of non-transparence, cloudiness and opaque condition on the cornea was diagnosed as corneal opacity.

2.5.7 Mastitis

Clinical findings of mastitis are with only mild change in either the milk or the udder, with the gross changes in the milk and or udder. Udder grossly enlarged and may be hot and painful, the milk have large clots or be purulent, body temperature more than 2°F above normal (Rahman *et al*, 1984).

2.5.8 Foot and Mouth Disease (FMD)

FMD were diagnosed in calves and adult cattle on the basis clinico-epidemiological determinants. The presence of fever and vesicular eruption in the mouth and on the feet of same animal with the history of rapid spread of the disease in bovine population were regarded as Foot and Mouth Diseases. PPR was diagnosed in both kids and goat on the basis of clinico-epidemiological determinants (Samad, 2008).

2.5.9 Papillomatosis

Papillomatosis was diagnosed in calves and visual examination and palpation of solid outgrowth of epidermis.

2.5.10 Black quarter (BQ)

Black quarter diagnosed in young cattle on the basis of clinical examination. The presence of fever, lameness and palpation of the affected muscles revealed crepitating and needle puncture of the affected muscles resulted oozing blackish fluid confirmed the diagnosis of black quarter.

2.5.11 Arthritis

Clinically arthritis in sucking and growing animals was diagnosed using clinical signs of lameness and swollen joints.

2.5.12 urogenital diseases

Urolithiasis was diagnosed mainly in castrated goats with the history and owners complain of complete retention of urine, and clinical findings of distension of urinary bladder, restlessness, occasionally rupture of urinary bladder and aspiration of fluid from the

abdominal cavity rupture of the bladder. Repeat breeders was diagnosed on the basis of reproductive history of the cow, checking of individual breeding records and giving a special view to the characteristic of repeat breeder's cow (Samad, 2008). Anestrus was diagnosed on the basis of history of not coming into heat within the normal cycle length. Uterovaginal prolapse was diagnosed when uterus was descended into the vagina and visible of the vaginal orifice. Clinical mastitis was diagnosed on the basis of owner's complaint about abnormalities of udder and milk production. Palpation of udder revealed enlarged and painful with the presence of clots/ flakes in the milk confirmed the diagnosis of mastitis.

2.5.13 protozoal dysentery

Clinical Presumptive diagnosis of dysentery can be on history of growing animals and clinical signs including dysentery, tenesmus, mild systemic involvement and dehydration. Confirmatory diagnosis can be made by demonstrating the oocysts in fecal sample of clinically affected animals.

2.5.14 Parasitological diseases

Hump sore (Stephanofilariasis), fascioliasis and paramphistomiasis were diagnosed on the basis of history and clinical findings and faeces examination (Blood and Radostits, 2000).

2.6 Statistical analysis

The data generated were entered into Microsoft Excel Worksheet (Microsoft excel 2007). Descriptive statistics were performed to calculate mean, standard error of mean and percentage.

CHAPTER 3

RESULTS

3.1 Prevalence of diseases and disorders in livestock

A total of 252 animals including 131 cattle and 121 goats were available during the study period at Upazilla Veterinary Hospital, Belabo from February to March, 2018.

Table 1: Overall prevalence of diseases and disorders in livestock

Species	No of cases	Percentage
Cattle	131	51.98
Goat	121	48.12
Total no of cases	252	100

3.2.1 Prevalence of diseases and disorders in cattle

In total 26 diseases or disorders were recorded in one hundred thirty one (131) cattle, brought to the Veterinary Hospital for treatment purposes during the study period. Among the 131 cases higher prevalence was recorded as fascioliasis 27 (21.37%) followed by tick infestation 14 (10.69%), mastitis 6 (4.58%), scabies 5 (3.82%), anaplasmosis 4(3.05%) and so on where lower is milk fever 1(0.76%) (Table 2).

Table 2: Prevalence of diseases and disorders in cattle

Sl No	Disease and disorders	Total no of cases	Percentage (%)	Mean \pm SE
1	Ascariasis	4	3.05	3.053 \pm 1.51
2	Fascioliasis	28	21.37	21.37 \pm 3.59
3	Fever	4	6.87	6.87 \pm 2.21
4	Foot and mouth disease	3	2.29	2.29 \pm 1.31
5	Foot rot	3	2.29	2.29 \pm 1.31
6	Hookworm	4	3.05	3.05 \pm 1.06
7	Mastitis	6	4.58	4.58 \pm 1.83
8	Naval ill	2	1.53	1.526 \pm 1.08
9	Papillomatosis	4	3.05	3.053 \pm 1.51
10	Paramphistomiasis	6	4.58	4.58 \pm 1.83

11	Polyarthritis	3	2.29	2.29±1.31
12	Coccidiosis	2	1.53	1.52 ± 1.07
13	Repeat breeding	2	1.53	1.52 ± 1.07
14	Scabies	5	3.82	3.81 ± 1.68
15	Tick infestation	14	10.69	1.68± 2.71
16	Anaplasmosis	4	3.05	3.05 ± 1.51
17	Anestrus	3	2.29	2.29±1.31
18	Black Quarter	2	1.53	1.52 ± 1.07
19	Cow pox	2	1.53	1.52 ± 1.07
20	Castration	3	2.29	2.29±1.31
21	Acidosis	4	3.05	3.05± 1.51
22	Milk fever	1	0.76	0.76±0.76
23	Surgical intervention	10	7.63	7.63±2.32
24	Aspiration Pneumonia	3	2.29	2.29±1.31
25	Myiasis	2	1.53	1.52 ± 1.07
26	Others	2	1.53	1.52 ± 1.07
Total cases		131	100	

3.2.2 Sex wise prevalence of diseases and disorders in cattle

The comparative clinical prevalence of disease and disorders of male and female cattle were presented in Table- 2 and revealed that males (54.12%) were more susceptible than female (45.8%). Tick infestation 6(8.45%) was prevalent followed by foot rot 3(4.23%) in male whereas mastitis 6(10%) and reproductive diseases such as repeat breeding 2(3.33%) was prevalent in female. Prevalence of fascioliasis was more or less same in both male and female, 13(18.31%) and 15(25%) respectively (Table 3 and 4).

Table 3: Overall disease prevalence of cattle according to sex

Sex	Total no of cases	Percentage
Male	71	54.12
Female	60	45.80

Table 4: Detailed disease prevalence of cattle according to sex

SL No	Disease or disorders	Male (%)	Female (%)
1	Ascariasis	4 (5.63)	-
2	Fascioliasis	13 (18.31)	15
3	Fever	5(7.04)	4
4	Foot and mouth disease	1(1.41)	2
5	Foot rot	3(4.23)	-
6	Hookworm	3(4.23)	1
7	Mastitis	-	6
8	Naval ill	2(2.82)	-
9	Papillomatosis	1(1.41)	3
10	Paramphistomiasis	3(4.23)	3
11	Polyarthritis	2(2.82)	1
12	Coccidiosis	1(1.41)	1
13	Repeat breeding	-	2
14	Scabies	-	5
15	Tick infestation	6(8.45)	8
16	Anaplasmosis	4(5.63)	-
17	Anestrus	-	3
18	Black Quarter	2(2.82)	-
19	Cow pox	-	2
20	Castration	3(4.23)	-
21	Acidosis	3(4.23)	1
22	Milk fever	-	1
23	Surgical intervention	9(12.68)	1
24	Others	2(2.82)	1
25	Myiasis	2(2.82)	-
26	Pneumonia	2(2.82)	-
Total		71 (100)	60 (100)

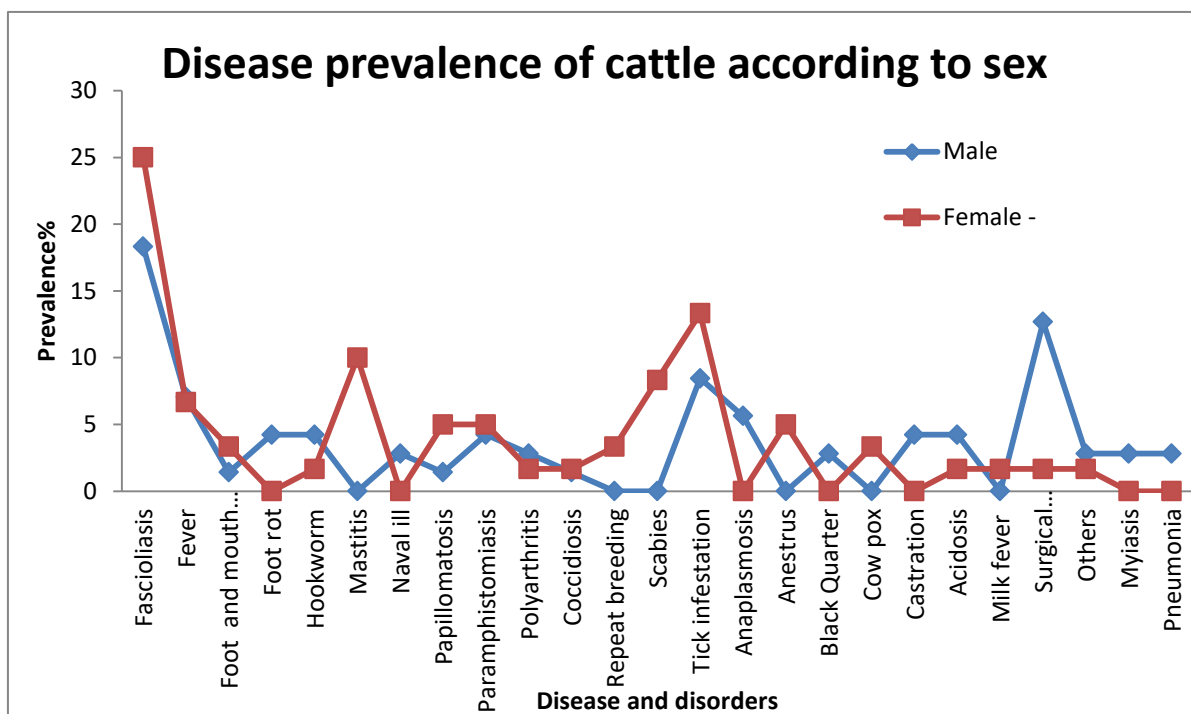


Figure 2: Disease prevalence of cattle according to sex

3.2.3 Prevalence of diseases and disorders in different age groups of cattle

It was revealed that middle aged cattle (6 months- 2 years) were frequently affected with different diseases (60.3%) than older (27.57%) and younger cattle (12.2%). Fascioliasis was most prevalent 20(25.25%) followed by tick infestation 11(13.92%), paramphistomiasis 4(5.06%) and black quarter 2(2.53%) in middle aged cattle, whereas

calves (below 6 months) were most susceptible to ascariasis 4 (25%) followed by naval ill 2(12.5%).

Table 5: Overall disease prevalence of cattle according to age

Age	Total no of cases	Percentage
Calves (<6 months)	16	12.21
Middle aged (6 months – 2 years)	79	60.3
Adult (> 2 years)	36	27.48

Table 6: Detailed disease prevalence of cattle according to age

SL No.	Diseases or disorders	Calves (<6 months) (%)	Middle aged (6 months to 2 years) (%)	Adult (>2 years) (%)
1	Ascariasis	4(25)	-	-
2	Fascioliasis	1(6.25)	20(25.32)	7(19.44)
3	Fever	3(18.75)	5(6.33)	1(2.78)
4	Foot and mouth disease	-	1(1.27)	2(5.56)
5	Foot rot	1(6.25)	2(2.53)	-
6	Hookworm	-	2(2.53)	1(2.78)
7	Mastitis	-	2(2.53)	-
8	Naval ill	2(12.5)	-	-
9	Papillomatosis	-	-	2(5.56)
10	Paramphistomiasis	-	4(5.06)	2(5.56)
11	Polyarthritis	1(6.25)	1(1.27)	1(2.78)
12	Coccidiosis	-	2(2.53)	-
13	Repeat breeding	-	2(2.53)	-
14	Scabies	-	3(3.8)	2(5.56)
15	Tick infestation	1(6.25)	11(13.92)	2(5.56)
16	Anaplasmosis	-	2(2.53)	2(5.56)
17	Anestrus	-	3(3.8)	-
18	Black Quarter	-	2(2.53)	-
19	Cow pox	-	-	2(5.56)
20	Castration	-	3(3.8)	-

21	Acidosis	-	3(3.8)	1(2.78)
22	Milk fever	-	-	1(2.78)
23	Surgical intervention	1(6.25)	7(8.86)	2(5.56)
24	Aspiration Pneumonia	-	2(2.53)	1(2.78)
25	Myiasis	-	2(2.53)	-
26	Others	1(6.25)	1(1.27)	-
Total		16	79	36

3.3.1 Prevalence of diseases and disorders in goat

In total 22 diseases and disorders were recorded in one hundred twenty one (121) goat, brought to the Veterinary Hospital for treatment purposes during the study period. Among the 121 cases highest prevalence was recorded as PPR 22(18.18%) followed by respiratory disorders 10(8.26%), endoparasitic infestation 10 (8.26%), dog bite wound 8 (6.61%), Myiasis 4(3.31%) and so on where lower is tetanus 1(0.83%).

Table 7: Prevalence of diseases and disorders in goat

SL No	Disease or disorders	Total No of cases	Percentage (%)	Mean±SE
1	Anaplasmosis	2	1.65	1.65±1.16
2	Anemia	3	2.48	2.47±1.41
3	Anorexia	7	5.79	5.78±2.13
4	Respiratory disorder	10	8.26	8.26±2.51
5	Ectoparasitic infestation	7	5.79	5.78±2.13
6	Conjunctivitis	3	2.48	2.47±1.41
7	Joint ill	5	4.13	4.13±1.81
8	Dog bite wound	8	6.61	6.61±2.26
9	Enteritis	3	2.48	2.47±1.41
10	Foot rot	4	3.31	3.3±1.63
11	Mastitis	1	0.83	0.82±0.82
12	Myiasis	4	3.31	3.3±1.63
13	Endoparasitic infestation	10	8.26	8.26±2.51

14	PPR	22	18.18	18.18±1.52
15	Digestive disorder	8	6.61	6.61±2.26
16	Tetanus	1	0.83	8.26±0.82
17	Urolithiasis	4	3.31	3.3±1.63
18	Arthritis	2	1.65	1.65±1.16
19	Surgical intervention	4	3.31	3.3±1.63
20	Acidosis	3	2.48	2.74±1.41
21	Others	5	4.13	4.1±1.81
22	Problem in hooves	5	4.13	4.1±1.81
	Total	121	100	

3.3.2 Sex wise prevalence of diseases and disorders in goat

The comparative clinical prevalence of disease and disorders of male and female cattle were presented in Table 7 and revealed that females (62.8%) were more susceptible than male (37.19%). PPR 14(18.42%) was prevalent in female whereas urolithiasis 3(6.67%) was prevalent in male.

Table 8: Overall disease prevalence of goat according to sex

Sex	Total no of cases	Percentage
Male	45	37.19
Female	76	62.80

Table 9: Detailed disease prevalence of goat according to sex

SL No	Disease or disorders	Male (%)	Female (%)
1	Anaplasmosis	-	2(2.63)
2	Anemia	1(2.22)	2(2.63)
3	Anorexia	3(6.67)	4(5.26)
4	Respiratory disorder	4(8.89)	6(7.89)
5	Ectoparasitic infestation	-	7(9.21)
6	Conjunctivitis	3(6.67)	-
7	Joint ill	4(8.89)	1(1.32)
8	Dog bite wound	2(4.44)	6(7.89)
9	Enteritis		3(3.95)
10	Foot rot	2(4.44)	2(2.63)

11	Mastitis	-	1(1.32)
12	Myiasis	1(2.22)	3(3.95)
13	Endoparasitic infestation	7(15.56)	3(3.95)
14	PPR	8(17.78)	14(18.42)
15	Digestive disorder	1(2.22)	7(9.21)
16	Tetanus	1(2.22)	-
17	Urolithiasis	3(6.67)	1(1.32)
18	Arthritis	-	2(2.63)
19	Surgical intervention	3(6.67)	1(1.32)
20	Acidosis	1(2.22)	2(2.63)
21	Others	-	5(6.58)
22	Problem in hooves	1(2.22)	4(5.26)
Total		45	76

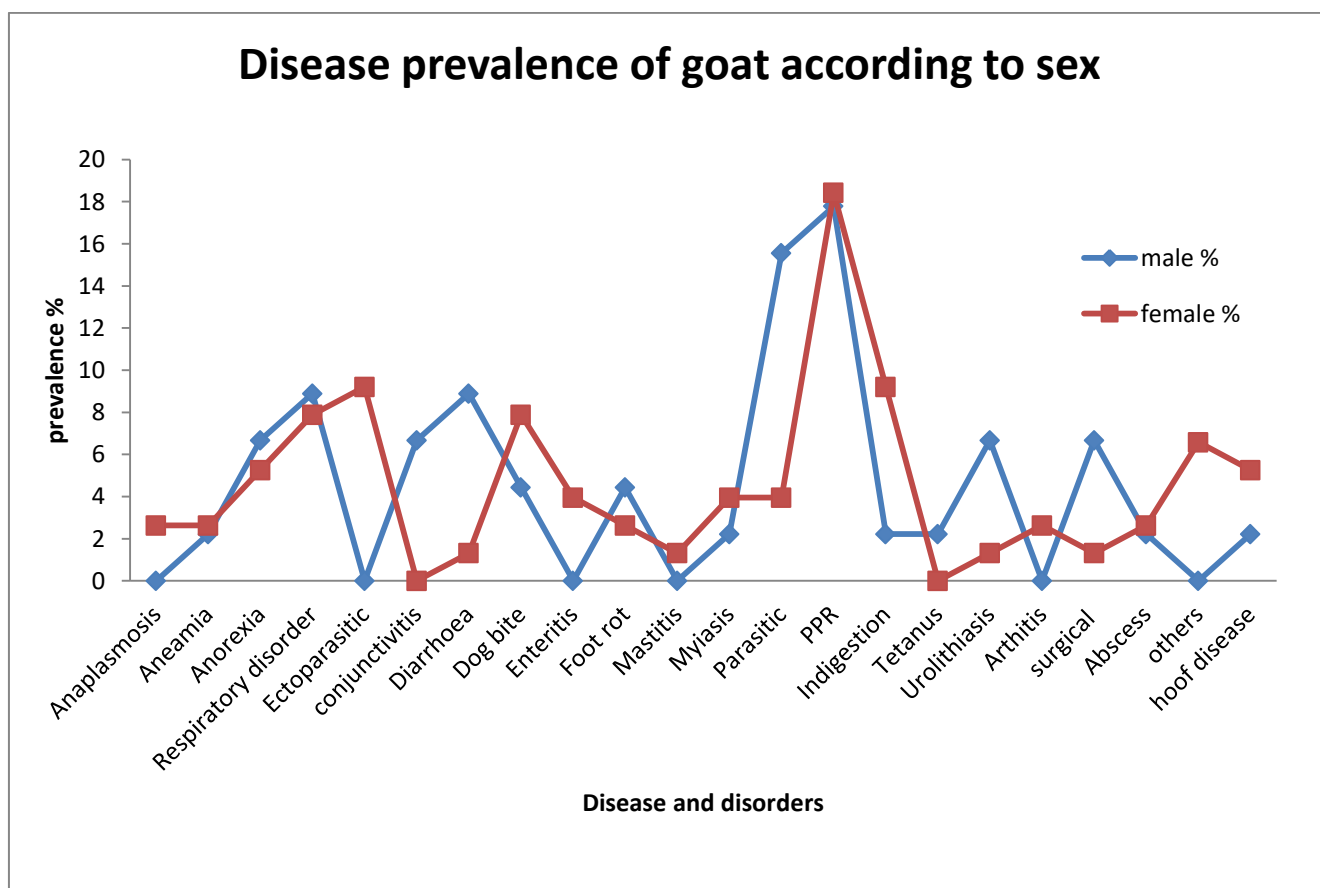


Figure 4: Disease prevalence of goat according to sex

3.3.3 Prevalence of diseases and disorders in different age groups of goat

It was revealed that middle aged goats (6 months- 2 years) were frequently affected with different diseases (55.37%) than kid (33.05%) and older (11.57%). Respiratory disorder was most prevalent 8(11.94%) followed by urolithiasis 3(4.48%) in middle aged goat.

Table 10: Overall disease prevalence of goat according to age

Age	Total no of cases	Percentage
Kids (< 6 months)	40	33.05
Middle aged (6 months – 2 years)	67	55.37
Adult (> 2 years)	14	11.57

Table 11: Detailed disease prevalence of goat according to age

SL no	Disease or disorders	Kids (<6 months) (%)	Middle aged (6 months to 2 years) (%)	Adult (>2 years) (%)
1	Anaplasmosis	-	1(1.49)	1(7.14)
2	Anemia	-	3(4.48)	-
3	Anorexia	3	4(5.97)	-
4	Respiratory disorder	2	8(11.94)	-
5	Ectoparasitic infestation	-	6(8.96)	1(7.14)
6	Conjunctivitis	1	-	2(14.29)
7	Joint ill	2	3(4.48)	-
8	Dog bite wound	2	6(8.96)	-
9	Enteritis	1	2(2.99)	-
10	Foot rot	3	1(1.49)	-
11	Mastitis	-	-	1(7.14)
12	Myiasis	-	2(2.99)	2(14.29)
13	Endoparasitic infestation	5	5(7.46)	2(14.29)

14	PPR	7	12(17.91)	3(21.43)
15	Digestive disorder	3	3(4.48)	2(14.29)
16	Tetanus	-	1(1.49)	-
17	Urolithiasis	1	3(4.48)	-
18	Arthritis	1	1(1.49)	-
19	Surgical intervention	3	1(1.49)	-
20	Acidosis	3	-	-
21	Others	2	1(1.49)	2(14.29)
22	Problem in hooves	1	4(5.97)	-
Total cases		40	67	14

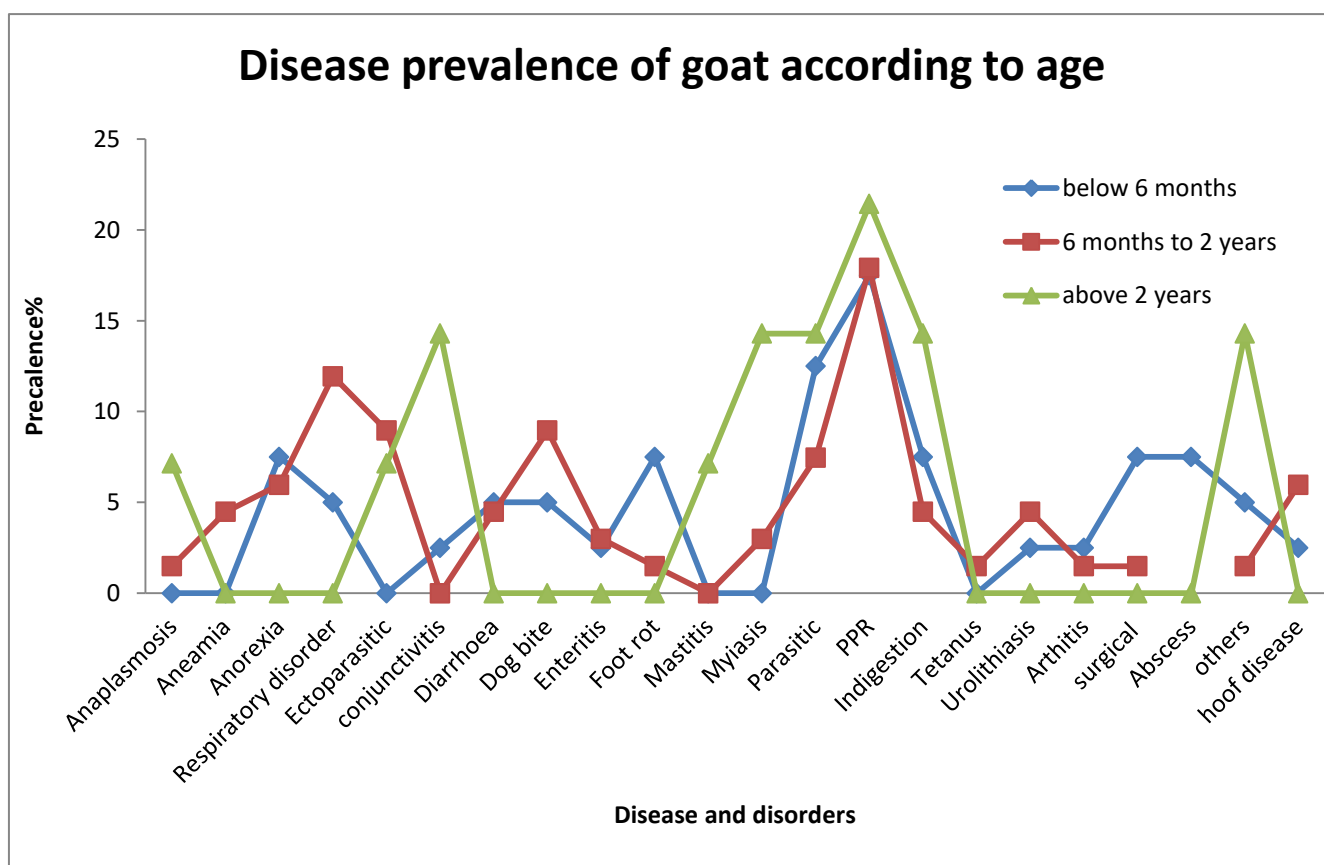


Figure 3: Disease prevalence of goat according to age

CHAPTER 4

DISCUSSION

The different clinical examination techniques and laboratory methods were used to determine the prevalence of diseases and disorders in cattle and goats during this two months period of internship program at Belabo Upazilla Veterinary Hospital. A total of 131 cattle and 121 goats were examined clinically and the samples considered significant for the diagnostic purposes were utilized for laboratory investigation. From the 131 cattle and 121 goats, examined, 26 diseases and disorders were recorded in cattle and 22 in goats during these two months of study period.

Out of 252 animals, most of the animals were affected with parasitic diseases. Gastro-intestinal nematodes in cattle were 4(5.63%) and in goats were 10(8.26%). It is a very common disease to all class of ruminants. About 10.98% diarrheic cattle had one or more groups of nematode infection (Amin and Samad, 1987). Raza *et al.*, 2007 and Islam and Taimur, 2008 observed that higher rates of nematode infection in female hosts than in males. Prevalence of infestation was higher in females (82.7%) than in males (53.4%)(Singh *et al.*,2008). Their results were in agreement with the finding of the present study which showed 18(25%) in female and 13(18.31%) in male. In contrast, Ibrahim *et al.*, (2008) reported higher prevalence of parasitic infestation in male than female hosts. Higher prevalence of parasites in females compared with males might be due to lower resistance of female during pregnancy.

Fascioliasis was recorded in cattle 28(21.37%) during 8 weeks of study period at UVH. The clinical occurrence of fascioliasis has an association with diarrhea.21.00% sub clinical prevalence of fascioliasis in cattle reported by Howlader *et al.*, (1990) which is higher than the clinical incidence of 3.4% recorded in cattle in this study. The occurrence of higher rate of a clinical infection of fascioliasis during summer (May to July) and autumn (August to October) months on both cattle and goats are in conformity with the report of Quadir (1981) who reported the peak infection period of *fasciola* infection during July to

September. Rahman *et al.*, (1972) reported the clinical incidence of 8.35 % fascioliasis in cattle in Mymensingh district and Garrels recorded fascioliasis 22.4%.

The occurrence rate of anestrus in cattle was 3(2.29%). The results were in conformity with the earlier observation of Rahman *et al.*, (1999) who reported 0.83% prevalence of anestrus in cattle. Samad (2008) reported that, the prevalence of paramphistomiasis of cattle in Bangladesh was (46-68)%.

In this study it was found that 2(3.33%) repeat breeding case in female cattle during the study period. The findings support the observation of Rahman *et al.*, (1999) who reported 0.64% prevalence of repeat breeder cattle. Das *et al.*, (1990); Rodriguez and Hernandez(1992) found significant variations in pregnancy rate when cows were inseminated at different times after the first sign of heat. The pregnancy rate of cows markedly reduced when a higher ambient temperature prevailed for two days before insemination to 4-6 days after insemination (Gwazdauskas *et al.*, 1975). High environmental temperature and relative humidity and poor management affected fertility of cattle (Zakariet *al.*, 1981).

Mastitis was recorded in cows 6(4.58%) during this 8 weeks investigation period. The clinical occurrences of mastitis in cow have been reported from Bangladesh (Rahman and samad, 1984) but a systemic study on this disease has not yet been in Bangladesh. Epidemiological studies on mastitis revealed that mastitogenic agents are widespread on different body sites of cows, milks hands, milking cows and in the milk samples. Moreover, teat apices are found to be the most common site from when these organisms have been isolated (Malhotca and Kapur, 1982).

Milk fever was only recorded in 1(1.7%) cows but in other animals during study. The clinical occurrence of milk fever cases in cows have been reported from Bangladesh (Ali and Ahamed, 1968) but detail study on this disease has not yet been made from Bangladesh.

Black Quarter was recorded in 2(1.53%) in middle aged calves, which was relevant to the previous study saying highly prevalence in young calves aging 6 months to 18 months (Blood *et al.*, 1989)

Naval ill was only recorded in calves 2(1.53%) during 8 weeks investigation period. It is very much common in calves rather than other animals and it is occur due to the infection of the umbilicus of newborn, but this disease has not been reported in literature from Bangladesh. However, it is common occur within 2-5 days of calves after birth and characterized by the painful and umbilicus and draining purulent materials as described by Shearer (1986).

Foot and mouth disease is an acute febrile diseases highly contagious disease of all cloven footed animals. It was recorded in cattle 3(2.29%) but not in goats during 8 weeks of study period at Belabo Upazilla. Rahman *et al.*, (1972) reported that the incidence of Foot and Mouth disease was (4.11%) under hospital conditions.

PPR was recorded only in goat 22(18.18%) during study period. It is highly acute contagious disease of small ruminants. Muddy floor and poor drainage system are the most vulnerable risk factor to occur the disease. Rainy season is most susceptible to occur the disease as accompanied with dry season (Islam *et al.*, 2001). In PPR decrease percentage of lymphocyte because the virus has affinity to the lymphoid tissue and destroy lymphocytes. Choudhury(1995) reported that the prevalence rate of PPR in Black Bengal goats was 67.28%. Rahman *et al.*, (1972) reported the prevalence of gastrointestinal disorders (12.66%). The occurrence of corneal opacity has frequently encountered in the in Bangladesh but there is a paucity of such published report in the inland literature.

Urolithiasis was only recorded in 4 (3.31%) goats but not in other cattle during study period. The clinical occurrence of urinary obstruction due to Urolithiasis in castrated goats has been reported from Mymensingh (Blood *et al.* 1989). The high prevalence rate of Urolithiasis in fatty goats in the urban areas in Dhaka might be due to stall feeding with excessive wheat bran which is rich in phosphate (Blood *et at.*, 1989). Vitamin A deficiency and concentrate diet predispose to urolithiasis (Singh *et al.*, 1980; Ahmed *et al.*, 1990).

Respiratory disorder case reported in goat was 10(8.26%) which was more or less similar to the prevalence rate in goats (5.80%) from India (Banerjee *et al.*, 1985).

Tetanus was recorded in goat 1 (0.83%) in this study during my 8 weeks period. However, this disease occurs in all farm animals all over the world mainly as individual sporadic cases although outbreaks are occasionally reported in sheep (Rao *et al.*, 1978). *Clostridium tetani* spores require anaerobic condition at the wound site of germination. Toxigenic strains of *Clostridium tetani* (causative agent of tetanus) have been isolated from the soil samples collected from different districts of west Bengal (Das *et al.*, 1976).

Mia and Hossain (1967) reported that hump sore to be the common skin diseases, followed by demodetic mange in cattle and papillomatosis in adult cattle (7-8%) of Bangladesh.

Foot rot was recorded in 3(4.23%) in cattle, 4(5.94%) in goats during my study period. It causes the lameness of the farm animal. Saikia *et al.*, (1992) reported 13.96% incidence rate of foot disease in bovine in Assam and Das *et al.*, (1992) reported 24.40% foot diseases in bovine from west Bengal. It is occurring due to both infectious and non-infectious sources.

Abscess was recorded only in 3(3.7%) cattle during my study period. There seems to be no published inland reports on the incidence of abscess in animals, though it is commonly encountered in veterinary practices in Bangladesh. However, both subcutaneous and internal abscesses have been reported in animals elsewhere (Ramakrishna *et al.*, 1982 and Singh *et al.*, 1988).

Samad (2008) reported coccidiosis found up to 3 months of age of calves were 37.72%. Rahman *et al.*, (1972) reported the clinical incidence of 11.74% coccidiosis in cattle in Mymensingh district which was not similar to the present study 2 (1.53%). Garrels (1975) made an investigation of parasitic diseases on 500 cows in 6 villages of Dhaka and Tangail districts who recorded coccidiosis (12.20%). Haque *et al.*, (1988) recorded 0.04% general clinical incidence of Black quarter and 50.74% case fatality rate among cattle population at Pabna district. Maximum susceptibility to this infection was recorded up to 2 years of age and warmer months of the year.

Papillomatosis was recorded in 4(3.05%) cattle which agreed with Mia and Haque (1967) who reported certain skin diseases of cattle and they found the incidence of papillomatosis 0.29% among hospital cases. Prasad *et al.*, (1980) reported papillomatosis is a chronic proliferative disease caused by a DNA virus belonging to the family Papovaviridae. The incidence of papillomatosis is required to be much higher imported and cross breed cattle than in the indigenous cows. Mia and Haque (1967) who reported certain skin diseases of cattle and they found the incidence of hump sore to be 29%, among hospital cases. Rahman *et al.*, (1972) reported the clinical incidence 1.45 % hump sore in cattle in Mymensingh district.

Prasad *et al.*, (1980) reported in overall 2.25% incidence rate of conjunctivitis in animals which was similar to present study record in goats 3(2.48%).

During the study period goats 2(1.65%) were affected with arthritis. Recorded prevalence of urolithiasis in goat was 4(3.31%). Hossain *et al.*, (1986) analyzed the 13694 case records of veterinary clinic of Bangladesh Agricultural University from, 1980 to 1984, of which 125(5.3%) urolithiasis which was close to the study result. McIntosh (1978) recorded urolithiasis as a disease of multifactorial origin. The dietary factors play significant role in their occurrence. Rahman *et al.*, (1975) reported 8.57% urolithiasis in goats. Rahman *et al.*, (1972) reported 9.0% prevalence of anorexia whereas it was 7(5.79%) in the studied area.

CHAPTER 5

CONCLUSION

The present study concluded that cattle and goats suffered mainly from parasitic diseases whereas the PPR was the major viral disease in goat and FMD for cattle. Mastitis was common in both cows and goats. The prevalence of parasitic diseases occurs due to the lack of deworming. Specific diseases and disorders were in animals due to age susceptibility such as black quarter, coccidiosis in young cattle and urolithiasis in the young goats. The knowledge of proper husbandry, awareness of vaccination and practices of proper hygienic management is mandatory to reduce the frequency of different diseases for maintaining the productivity.

CHAPTER 6

LIMITATIONS

During my study period following limitations were observed:

- Short duration of the assigned period.
- Small number of sample population.
- Lack of laboratory diagnosis facilities.
- Some owners were not cooperative.

CHAPTER 7

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ANNEX

Questionnaire for Prevalence of various diseases at Upazilla Veterinary Hospital, Belabo,
Narsingdi

Case Registration No.:

Date:

1. Name of the owner:

Upazilla: **District:**

2. Patients Data:

Species: Goat/ Cattle/ Sheep/ Poultry/ Other (.....) **Breed:** Local/ Cross/
Exotic

Age: **Sex:** F/M **Weight:**

Body Condition Score (BCS): 1(Cachectic)/ 2(Poor)/ 3(Fair)/ 4(Good)/ 5 (Over
weight/Fat)

3. Clinical History:

Onset: Sudden/Gradual **Duration of illness:** hrs./days **Weakness:** Yes/No.

Pre-disposing Factors:

.....
.....

4. Clinical Examination:

Temperature: °F **Hair Coat:** Shiny/ Rough & Stray/ lesions/ other.

Skin: Normal/ Wound/ Ecto-parasitic (Larvae or Adult)/ Alopecic/ Dermatitis/
Wrinkled.

Affected Region of the Body:

Type of Wound:

Depthness of myiatic wound: Deep/ Superficial

Secondary infection: +/-

Frequencies of larvae on the affected site: a few (< 15)/ Moderate (15-40)/ a lot
(>40).

General attitude: Alert/ Dull/ Depressed.

Posture: Normal/ Defective

Gait: Normal/ Lameness.

Mouth lesion: Yes/No

Foot lesion: Yes/No

.....

Signature of interviewer

BIOGRAPHY

Shadekuzzaman Rakib; son of Md. Moniruzzaman and Rasida jaman passed the Secondary School Certificate (SSC) Examination in 2009 with GPA 5.00 from chitain dakhil madrasha, Belabo, Narsingdi followed by Higher Secondary School Certificate (HSC) Examination in 2011 with GPA 4.80 from Abdul Kadir Mullah City College, Narsingdi. Now he is an interns' student of Doctor of Veterinary Medicine in CVASU. His favorite hobby is reading books; scientific journals and he want to be an honest Veterinarian. He has immense interest to work on field based practice.

GALLERY



Fig 01: Fascioliasis



Fig 02: Babesiosis



Fig 03: FMD



Fig 04: PPR



Fig 05: Abscess



Fig 06: Bovine ephemeral fever



Fig 07: Tetanus

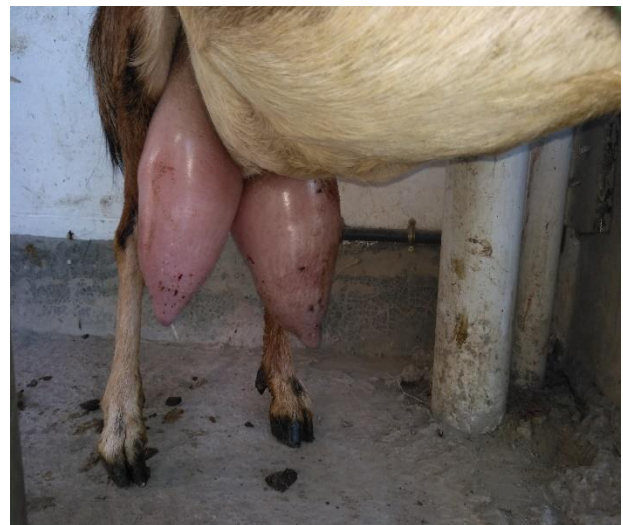


Fig 08: Udder edema



Fig 09: Mastitis



Fig 10: Corneal opacity



Fig 11: Papilomatosis



Fig 09: Ring worm