

## Abstract

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A significant number of animals of different species were regularly presented to Sandwip Upazilla Veterinary Hospital (UVH) from surrounding villages for treating clinical cases, de-worming, vaccination. Therefore this UVH was considered to conduct a descriptive study to assess the occurrence of clinical cases in cattle and goats during the period of 2 months from February to March 2018. A total of 134 cases (109 cattle, 25 goats) were analyzed. Diagnosis of cases were made based on clinical history, clinical signs as well as using common laboratory techniques (in some cases). Distribution of cattle cases were as follows: 36.69% Parasitic infestation, 2.75% Foot and Mouth Disease, 9.17% nutritional deficiency, 9.17% mastitis, 16.60% reproductive disorders, 5.5% enteritis, 0.91% BQ, 1.83% acidosis, 2.75% bloat and 1.83% abscess. Recorded goat cases were 24% dog bite, 20% Parasitic infestation, 8% PPR, 4% bloat, 8% enteritis and 4% acidosis. In conclusion % Parasitic infestation was quite high in both animal species. So, a defined de-worming schedule should be followed in the study area. As FMD in cattle and PPR in goat were also high, the strict vaccination schedule along with good standard of farm hygiene and bio-security should be followed. Dog bite was also a problem for goats and so proper care should be taken if it is bitten by rabid dogs.

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**Keywords:** Clinical Cases, Cattle, Goat, Sandwip, Chittagong

# Chapter I

## Introduction

Livestock is an essential component of the mixed farming system practiced in Bangladesh for centuries. Ruminant, especially cattle and goats constitute the major portion of the livestock. According to DLS,( 2015-2016) the population of cattle and goat in Bangladesh are 237.85 lakhs and 257.66 lakhs respectively. The number of livestock is increasing worldwide as well as our country and they are becoming increasingly important around the world for a variety of reasons. In Bangladesh the livestock sector is highly important in rural area because it works as big economic source for the poor people. The economy of Bangladesh is agro based. About 52% of the gross domestic product (GDP) comes from agricultural sector of which crops alone shares 38.8%, livestock 65%, fisheries 3.5% and forestry 3.2% (Sikder, 1990).

Veterinary hospital is an ideal and reliable source of information about animal diseases and their solution. People from the neighboring areas bring their sick animals to the Veterinary hospital every day. But sufficient number of veterinary hospital is also not available. Analysis of the case record gives a comprehensive idea about the disease problems at local areas. In the last few decades, as the major infectious diseases of cattle in Bangladesh are brought under control by vaccination and farmer's awareness, emphasis has increasingly shifted to economically important diseases to the dairy producers. However, more information is required to describe the pattern of occurrence of clinical diseases for the provision of appropriate veterinary care and effective disease control programme and animal production.

For the development of economic condition essential remedy should be taken, especially for the developing country like us. Research center and veterinary hospitals should perform their activities properly. As most of the people are unconscious about the proper way and time of de-worming, vaccination etc. it should be ensured to teach them by various programmes, seminar and meetings.

As the study is related to find out the prevalence of different important disease in cattle and goat around Sandwip Upazilla veterinary hospital and I need to collaborate with the rural people, it is helpful to estimate the rural livestock production, highly prevalent diseases which causes a greater losses in the livestock production at rural community.

### **Objectives of the study**

- ❖ To estimate the prevalence of various diseases in cattle and goats in Sandwip upazilla, Chittagong.

## Chapter II

### Materials and Methods

#### Description of the study area

Chittagong is a major coastal city and financial centre in southeastern part of Bangladesh lies at 22°22'0" North latitudes and 91°48'0" east longitude. The tropical monsoon climatic condition characterizes by annual average temperature of 25°C to 30°C, humidity of 79%. Livestock rearing is common practice in chittagong as major or subsidiary income source. The predominant livestock include cattle, goat as well as poultry (backyard and commercial). Goat and Cattle are reared in intensive, semi intensive, free range and tethering system in Chittagong. Farmers use to keep their animal in their own houses as well as separate houses with low bio-security and hygienic standard. The backyard and smallholding farmers rear the animals as meat purpose.

#### Study area and duration of work

The present study was conducted in Upazila veterinary hospital, sandwip. Most of the animal in this area are reared by farmers at their homestead and are managed under rural husbandry practice. The total number of cattle and goat at Sandwip upazilla are 1.5 lakhs and 25000 respectively.



Fig.1: Chittagong District



Fig.2: Sandwip Upazilla (Study area)

#### Study population

The patient registered to Sandwip veterinary hospital with the owner complaints of different clinical conditions during the 2 months of internship period (February to March, 2018) were selected for the study population.

## **Clinical examination**

Clinical examination of animals with different ages were conducted on the basis of diseases history, owners complaint and techniques used by Rosenberger (1979) and Samad (1988) to diagnose the following diseases. History of each case (present and past) were carefully taken that gave a guideline for examination of the animals. Basic parameter such as the temperature, pulse rate and respiration rate from each of these sick animals were recorded. In case of different diseases the clinical signs were different, such as in worm infestation the signs were: inappetance, loss of weight, bottle jaw syndrome, history of feeding of water hyacinth etc (Karim *et al.*,2014). In case mastitis there was hardening of quarter of udder, closing of teat canal. In case of acidosis of goat there was swelling of abdomen; cessation of feeding was the common signs. In case of nutritional deficiency there was history of low graded feed, no supply of vitamin supplement, imbalance in ration of daily feed.

In general examination physical condition like behavior, posture, gait, superficial skin wound, distention of the abdomen, locomotive disturbance etc. were observed by visual examination of the animal . Different parts and systems of the body of each animal were examined by using procedure of palpation, percussion, auscultation, needle puncture and walking of the animals (Kabir *et al.*,2010).

The following conditions were diagnosed on the basis of above mentioned procedure and clinical findings-

## **Medicinal cases**

### **Parasitic infestation**

Parasitic infestation is very common for all types of animal like cattle, goat in current study area. The worm infestation was diagnosed by these clinical signs: profuse diarrhoea ,emaciation, inappetance,history of no deworming (Howlader *et al.*,1990).

### **Mastitis**

Mastitis is very common disease for cow and doe.The main features of this disease are swollen udder ,pain, block of teat canal, clotted milk, color change of udder (Radostits *et al.*, 2007).

### **Nutritional deficiency**

Nutritional deficiency is common to almost the entire animal. The farmers have not much knowledge about nutrition in food. So there is lacking of nutrition. The main features are - emaciation, lower growth rate, symptoms of other disease.

## **Acidosis**

The author have found acidosis mainly in goat. In rural area it is a great problem. The common features by which the acidosis is diagnosed that are swollen abdomen, off feeding, There is history of feeding rice, bread etc. In PH meter low of PH of ruminal content was found.

## **Bloat**

Bloat is mainly a dietary in origin and occurs most frequently in ruminants. In UVH it is found a significant number of cases in goat and cattle is 15% and 1.5% respectively (table 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.

## **Digestive disorders (diarrhoea)**

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

## **Respiratory disorders (pneumonia)**

This disorder was diagnosed on the basis of owner's complaint and recording abnormal function respiratory system like polypnoea, dyspnoea, coughing, sneezing, nasal discharging, thoraco abdominal breathing etc.

## **Black quarter**

Black quarter(BQ) was diagnosed on the presence of pronounced swelling of the affected muscles of upper limb with gaseous crepitation.I have attended a cases of BQ near my residence.



**(A) Dressing of dog bite wound in a calf**



**(B) Administration of drug in a goat**





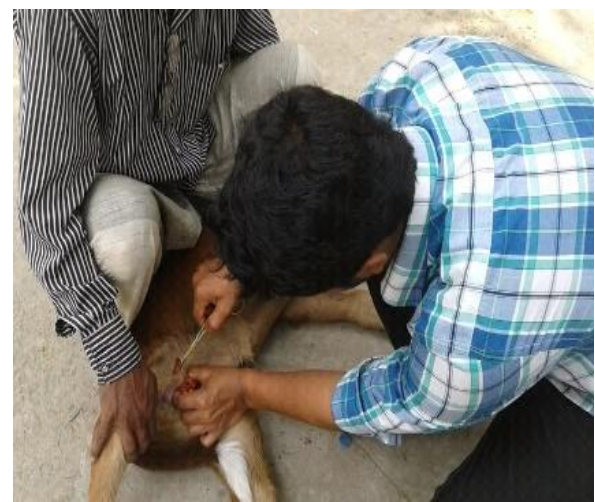
**(C) Dressing of gum of a gingivitic patient**



**(D) Removal of exudates from a BQ affected calf**



**(E) Fecal examination at UVH**



**(F) Umbilical abscess**

**Fig.3: Handling of different cases**

### **Foot and Mouth disease (FMD)**

Foot and Mouth Disease (FMD) was 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**

PPR was very common disease in goats in the study area. Some common signs of PPR are noted as nasal discharge, intermittent diarrhoea, rising of body temperature etc.

## **Gynaeco-obstetrical cases**

### **Retained placenta**

Retained placenta was diagnosed by knowing the history of animal e.g time of parturition. Firstly tried to remove the placenta manually and then intrauterine antibiotics was administered.

### **Repeat breeding**

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.

### **Anoestrus**

Anestrus was diagnosed on the basis of history of not coming into heat within the normal cycle length. It was also common in my UVH.

## **Surgical cases**

### **Abscess**

There had a less number of surgical cases. But amongst them abscess was also found. It was confirmed by the presence of pus in the elevated area through needle puncture.

### **Castration**

There also have a few cases of castration in my UVH. It was done in goats by open covered method.

### **Dog bite**

Dog bite also a very common scenario for animal in my study area. The main features are - scratching mark, wound, and oozing of blood.

## **Statistical analysis**

Data were organized in the Microsoft Excel spreadsheet and percentages of disease conditions prevalent in different diseases were calculated.



## Chapter III

### Results and discussion

During the study period a total of 134 clinical cases of which 109 cattle and 25 goat cases were recorded and analyzed. Among the clinical cases, parasitic infestation (cattle 36.69% and goats 20%), mastitis (cattle 9.17%), acidosis (cattle 1.83% and goat 4%), Diarrhoea (cattle 5.5% and goat 8%), bloat (cattle 2.75%, goat 4%) were recorded as major disease problems in both cattle and goats. Beside these, Dog bite in goat was also a major problem (24%). Apart from these conditions cattle were presented in the hospital with abscess 1.83%, nutritional deficiency 9.17%, FMD 2.75%. In case of goat PPR 8%, abscess 8% is also recorded.

A previous study showed that gastrointestinal nematodiasis (cattle 37.8% and goats 19.6%), diarrhoea (cattle 13.4% and goats 19.6%) (Karim *et al.*, 2014) which supports our study. The occurrence of bloat in cattle supports the earlier finding of (Rahman *et al.*, 2012) who reported 2.2% bloat in cattle and 2.5% in goats. The findings in case of mastitis is 9.17 which is contradicted to the report of Sarker *et al.* (1999), Samad (2001) and Rahman *et al.* (2012) who reported clinical mastitis in 0.89%, 0.71% and 0.9% cows, respectively. BQ was recorded 0.91% in cattle (table 2). These observations somehow support the earlier findings of Rahman *et al.* (1972), Rahman *et al.* (1999) and Samad (2001) who reported 0.31%, 0.46% and 0.23% incidence of BQ in cattle. The % of FMD is 2.75, this finding supports the finding of Samad (2001) and Rahman *et al.* (2012) reported 1.79% and 1.3% cases of FMD in cattle. This study recorded 8% cases of PPR in goats (Table 1). This finding is higher than the finding of Rahman *et al.* (2012) who reported 5.2% PPR cases in goats. Among the gynaeco-obstetrical cases, retained placenta (cattle 5.5%) and repeat breeding (cattle 11%) were recorded. This finding contradicts with the reports of Rahman *et al.* (1999) and Samad (2001) who reported 0.37% and 0.50% cases of retained placenta in cows, respectively. Hossain *et al.* (1986) and Rahman *et al.* (2012) reported 9.1% and 8.1% cases of retained placenta in cows. Abscess was found in cattle 45.8% and in goats 5.6%. 20.8% cattle and 44.4% goats were suffering from urolithiasis and overgrown hoof was found in 33.3% goats (Karim *et al.* 2014).

**Table 1:Overall prevalence of cases in Cattle and Goat:**

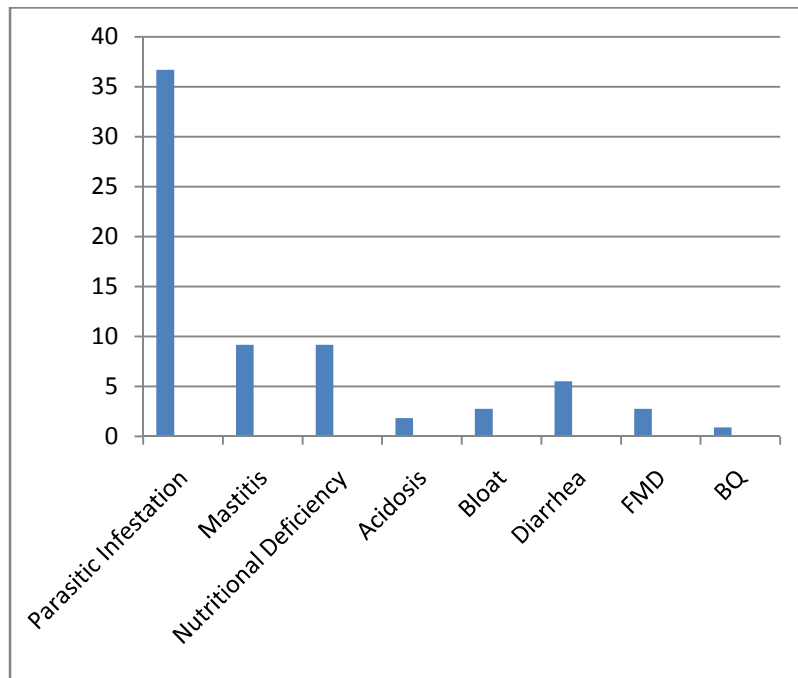
Sl.No	Cattle (N=109)	Goat(N=25)
1.	<b>81.34%</b>	<b>18.65%</b>

Table 1 represents the total prevalence in Cattle and goat out of total 134 animals. In table 2 it represents the clinical prevalence of different diseases in Cattle and goats recorded at Upazilla Veterinary Hospital, Sandwip.

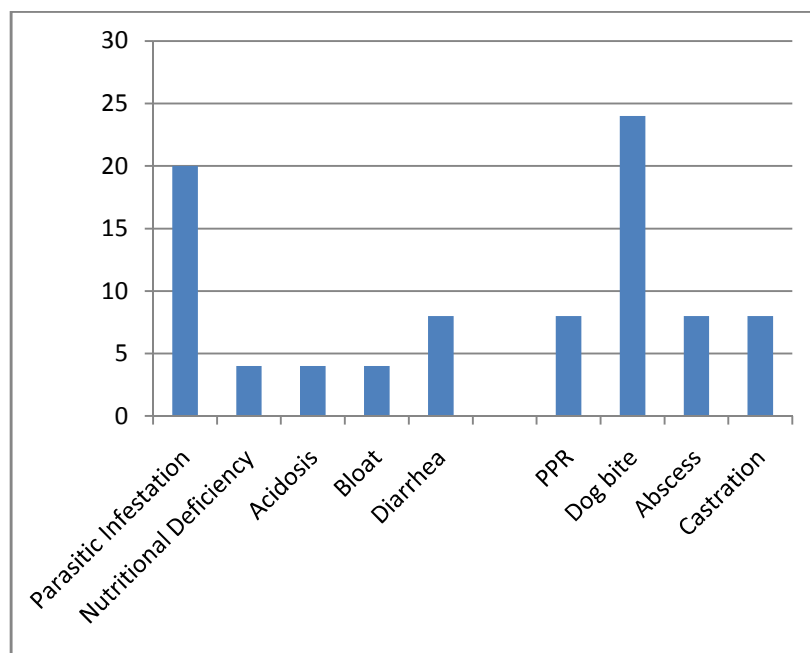
**Table 2: Clinical Prevalence of Diseases in Cattle And Goats Recorded at Upazilla Veterinary Hospital, Sandwip, Chittagong**

Sl. No.	Diseases	Cattle (n=109)		Goat (n=25)	
		No. of Affected Cattle	Percentage (%)	No. of Affected Goats	Percentage (%)
1.	Parasitic Infestation	40	36.69	5	20
2.	Mastitis	10	9.17	0	0
3.	Nutritional deficiency	10	9.17	1	4
4..	Acidosis	2	1.83	1	4
5.	Bloat	3	2.75	1	4
6.	Diarrhea	6	5.50	2	8
7.	Pneumonia	0	0	1	4
8.	BQ	1	0.91	0	0
9.	FMD	3	2.75	0	0
10.	PPR	0	0	2	8
<b>Sub-total (Medicinal Cases)</b>		<b>75</b>	<b>68.7</b>	<b>14</b>	<b>52</b>
11.	Retained placenta	6	5.50	0	0
12.	Repeat breeder	12	11	0	0
13.	AI	14	12.84	0	0
<b>Sub-total Gynaecological Cases)</b>		<b>32</b>	<b>29.34</b>	<b>0</b>	<b>0</b>
14.	Abscess	2	1.83	2	8
15.	castration	0	0	2	8
16.	Urolithiasis	0	0	1	4
17.	Dog bite	0	0	6	24
<b>Sub-total (Surgical Cases)</b>		<b>2</b>	<b>1.83</b>	<b>11</b>	<b>44</b>
<b>Overall</b>		<b>109</b>	<b>99.94</b>	<b>25</b>	<b>96</b>

So it is clear that Cattle is more prone to diseases than Goat as table shows the prevalence in cases.



**Fig4:Percentage of occurrence of Diseases in Cattle**



**Fig4:Percentage of occurrence of Diseases in Goat**

### **Limitation**

The study area is located in a remote area of Chittagong city. Peoples of the area are not very much educated and aware about animal rearing and treatment. Sometimes they do not bring their animal for follow up and very often owners come to the hospital without the diseased animal for treatment. So it is needed to administer treatment without checking the animal.

## **Chapter IV**

### **Conclusion**

Cattle and goats are one of the most promising species for future income generation for many people, offering scopes for reducing poverty and unemployment problem in Bangladesh. From the study it was observed that both cattle and goats were susceptible to parasitic infestation which causes heavy economic losses in every year. so, regular anthelmintics treatment should be given to control the parasitic diseases. As FMD in cattle and PPR in goat were also high, the strict vaccination schedule along with good standard of farm hygiene and bio-security should be followed. Dog bite was also problem for goats and so proper care should be taken if it is bitten by rabid dogs. As a whole proper planning and program should be undertaken to prevent and control diseases of cattle and goat in the study area.

## Chapter V

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**The author**

## Biography



I am Md. Mahbubur Rahman son of Maksudur Rahman and Lucky Akter. I am from Chittagong district, Bangladesh. My SSC passing year is 2010 and HSC passing year is 2012. Now, I am an intern student of faculty of Veterinary Medicine of Chittagong Veterinary and Animal Sciences University obtaining session (2012-2013). I hope to become a good veterinarian in future. I would like to serve the animal by treating them and I feel lucky myself that Almighty give me such type of opportunity to remain in close touch with the animal and serve the society as well as nation.