A REPORT ON CLINICAL PREVALENCE OF DISEASES AND DISORDERS IN CATTLE AND GOATS AT THE UPAZILLA VETERINARY HOSPITAL, MOHAMMADPUR, MAGURA

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ABSTRACT
An investigation was undertaken to determine the general clinical prevalence of diseases and disorders in cattle and goats at the Upazilla Veterinary Hospital, Mohammadpur, Magura during the period from January to December 2010. A total of 536 clinical cases (327 cattle and 209 goats) were recorded and analyzed. Diagnosis of each of the clinical cases was made on general examination, physical examination, clinical examination, microscopic examination and using common laboratory techniques. The clinical cases were divided into three groups on the basis of treatment required viz. (1) Medicinal, (2) Gynaeco-obstetrical and (3) Surgical cases. Among the three types of ruminant cases, medicinal cases constituted highest percentage (cattle 86.5% and goats 90.4%) in comparison to gynaeco-obstetrical (cattle 6.1% and goats 0.9%) and surgical (cattle 7.3% and goats 8.6%) cases. Among the medicinal cases, gastrointestinal nematodiasis (cattle 37.8% and goats 19.6%), diarrhoea (cattle 13.4% and goats 19.6%), fascioliases (cattle 12.4% and goats 1.6%), paramphistomiasis (cattle 8.8% and goats 2.6%), fever (cattle 7.8% and goats 12.7%) were recorded major disease problems in cattle and goats. Among the gynaeco-obstetrical cases, retained placenta (cattle 30% and goats 50%) and repeat breeding (cattle 70% and goats 50%) were recorded as major gynaeco-obstetrical problems in cattle and goats. Abscess (cattle 45.8% and goats 5.6%), myiasis (cattle 20.8% and goats 20.8%), navel ill (cattle 12.5), urolithiasis (cattle 20.8% and goats 44.4%) and overgrown hoof (goats 33.3%) and gid disease (goats 5.6%) were recognized as the main disorders which required surgical interventions. It may conclude that a number of diseases have been occurring in the Mohammadpur upazila and this report may help to develop control strategies against major diseases reported in this study.

Key words: Clinical prevalence, diseases and disorders, cattle, goat

INTRODUCTION
Livestock is an important component of the mixed farming system practiced in Bangladesh for centuries. Ruminant, especially cattle and goats constitute the major portion of the livestock. Most of these animals are reared under smallholder traditional management system in rural areas. The management practices of animals and geo-climatic condition of Bangladesh are favorable for the occurrence of various diseases. 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. Analysis of the case record gives a comprehensive idea about the disease problems at local areas. Although some reports on clinical case records from Bangladesh Agricultural University Veterinary Clinic (Rahman et al., 1972; Hossain et al., 1986; Das and Hashim, 1996; Samad, 2001; Samad et al., 2002), Haluaghat Upazila Veterinary Hospital, Mymensingh (Sarker et al., 1999) and Dairy Cooperatives in Pabna district (Pharo, 1987), Ulipur Upazila Veterinary Hospital, Kurigram (Kabir et al., 2010), Chandanaish Upazila of Chittagong district, Bangladesh (Pallab et al., 2012) and Patuakhali Science and Technology University Veterinary Clinic (Rahman et al., 2012) are available but similar report on ruminants are very limited in Mohammadpur upazila of Magura district of Bangladesh. 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.

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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. The objective was to determine the clinical prevalence of diseases and disorders in cattle and goats at the Upazila Veterinary Hospital, Mohammadpur, Magura.

MATERIALS AND METHODS
This clinical study was undertaken at the Upazila Veterinary Hospital, Mohammadpur, Magura to determine the general clinical prevalence of clinical diseases and disorders in cattle and goats during the one year study period from January to December, 2010.

General examination
Physical condition, behavior, posture, gait, superficial skin wound, prolapse of the uterus and vagina, salivation, nasal discharge, distension of the abdomen, locomotive disturbance etc were observed by visual examination of the patient.

Physical examination
Examination of different parts and system of the body of each of the sick animals were examined by using procedure of palpation, percussion, auscultation, needle puncture and walking of the animals.

Clinical examination
The temperature, pulse, and respiratory rate from each of these sick animals were recorded. Clinical examinations of all 536 clinically sick ruminants (cattle = 327, goat = 209) of different ages were conducted on the basis of disease 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, common laboratory techniques used by Rosenberger (1979) and Samad et al. (1988). These recorded clinical cases were primarily categorized into three major groups on the basis of treatment required. These groups were: (1) Medicinal cases, (2) Gynaeco-obstetrical cases and (3) Surgical cases. These three groups that were considered sufficiently distinct so as to make clinical diagnosis accurate. However, the eye diseases which also include corneal opacity were included under medicinal cases because surgical intervention has never been practiced in Bangladesh (Osmani et al., 2000). Data were organized in the Microsoft® Excel spreadsheet and percentages of disease conditions prevalent in different diseases were calculated.

RESULTS AND DISCUSSION
Of the 327 recorded clinical cases of sick cattle, 86.5% was medicinal, 6.1% gynaeco-obstetrical and 7.3% surgical cases (Table 1). Of the 209 clinically sick goats, 90.4% had medicinal, 0.9% gynaeco-obstetrical and 8.6% surgical problems (Table 1). This observation supports the earlier report of Rahman et al. (2012) who recorded 84.1% medicinal, 4.7% gynaeco-obstetrical and 11.2% surgical cases in cattle; 81.0% medicinal, 1.1% gynaeco-obstetrical and 17.9% surgical cases in goats in Patuakhali Science and Technology University Veterinary Clinic, Babugunj, Barisal. Samad (2001) who recorded 90.76% medicinal, 5.46% gynaeco-obstetrical and 3.78% surgical cases in goats in 1999 to 2001 from the Bangladesh Agricultural University (BAU) Veterinary Clinic, Mymensingh.

Medicinal cases
Fever
Analysis of the clinical cases of ruminants revealed that 7.8% cattle and 12.7% goats were affected with fever of unknown etiology. The percentages of occurrence of fever in this study supports the earlier reports of 5.1% to 12.1% cases of fever in cattle (Pharo, 1987; Hoque and Samad, 1996; Samad, 2001; Samad et al., 2002; Rahman et al., 2012) and 10.37% and 4.4% fever cases in goats (Hoque and Samad, 1997; Rahman et al., 2012).
Prevalence of Diseases and Disorders in Cattle and Goats

Anorexia

Anorexia was reported in 1.4% cattle and 7.4% in goats (Table 1). Prasad et al. (1980) recorded anorexia syndrome as one of the commonest problem amongst the non specific clinical entities in routine ruminant practice.

Bloat

Bloat is mainly a dietary in origin and occurs most frequently in ruminants in Bangladesh (Sutradhar et al., 2000). This study recorded 2.5% cases of bloat in cattle and 2.6% in goats (Table 1). 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. Samad (2001) reported 1.83% prevalence of bloat in cattle and 3.98% in goats. Sutradhar et al. (2000) reported 1.73% cases of bloat in cattle from some Upazila Veterinary Hospitals. These observations could be compared well with the findings of Hossain et al. (1994) and Rahman et al. (1999) who reported 4.0% and 0.37% prevalence of bloat in buffaloes and cattle, respectively.

Diarrhoea

Diarrhoea was found to be the major digestive disorders in ruminants. Diarrhoea cases were 13.4% in cattle and 19.6% in goats (Table 1). These observations could be compared well with the 6.94% of non-specific diarrhoea in dairy cows, 8.99% in cow-calves and 12.23% in goats (Hoque and Samad, 1996, 1997) and 7.6% in cattle and 12.1% in goats (Rahman et al., 2012). Samad (2001) reported 25.97% and 9.91% of diarrhoeal diseases in cattle and goats, respectively. Rahman et al. (1999) reported 4.78% of diarrhoeal diseases in cattle.

Dysentery

Dysentery is characterized by inflammation of the intestine with evacuation of blood and mucus contained faeces, accompanied by tenesmus and colic. This disorder was recorded in 1.1% cattle and 6.3% goats (table 1). Samad (2001) reported 1.76% and 1.87% dysentery in cattle and goats.

Pneumonia

Pneumonia recorded in cattle and goats were 0.7% and 9.6%, respectively (Table 1). Rahman et al. (2012) recorded 5.1% and 16.8% cases of pneumonia in cattle and goats. Cases of pneumonia in cattle were comparatively lower than the earlier reports of Samad (2001) and Samad et al. (2002) who reported 0.84% and 1.24% pneumonia in cattle, respectively.

Corneal opacity

Corneal opacity in cattle and goats were recorded 0.4% and 2.6% under this group (Table 1). Rahman et al. (2012) reported 1.9% and 9.9% cases of corneal opacity in cattle and goats, respectively.

Mange

Mange was recorded in 4.6% cattle and 5.3% goats (Table 1). Cases of mange in cattle and goats were comparatively higher than the reports of Samad (2001) who recorded 0.33% in cattle and 2.11% in goats. Rahman et al. (1972) reported 2.08% general prevalence of mange in cattle. However, Demodectic mange in cattle (Samad et al., 1979; Nooruddin and Rahman, 1985), psoroptic mange in goat (Rahman et al., 1978) has been reported from Bangladesh.

Parasitic diseases

The prevalence of different parasitic diseases were 12.4% and 1.6% Fascioliasis, 8.8% and 2.6% Paramphistomiasis, 37.8% and 19.6% Gastro-intestinal nematodiasis, 1.4% Ectoparasites, 1.4% and 1.1% Humpsore in cattle and goats, respectively (Table 1). Howlader et al. (1990) reported 21% sub clinical prevalence of Fascioliasis in cattle. However, this result differ from the earlier reports of Amin and Samad (1987) who reported 10.98% diarrhoea of cattle due to one or more groups of Nematode infestation. The clinical
prevalence of Paramphistomiasis recorded in cattle has been reported from Bangladesh but detail studies on this disease have not yet been made from the country.

**Foot-and-mouth disease (FMD)**
This study recorded 2.5% cases of FMD in cattle (Table 1). This finding support the finding of Samad (2001) and Rahman *et al.* (2012) reported 1.79% and 1.3% cases of FMD in cattle and only one (0.08%) case in goat. Comparatively higher prevalence rates of FMD in cattle have been reported by Rahman *et al.* (1972), Hoque and Samad (1996), Sarker *et al.* (1999) and Rahman *et al.* (1999) who reported 5.71%, 10.05%, 8.58% and 5.78%, respectively.

**Black quarter**
Black quarter (BQ) was diagnosed on the presence of pronounced swelling of the affected muscles of upper limb with gaseous crepitation. BQ was recorded in 4 (1.4%) cattle (table 1). These observations 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. However, Haque *et al.* (1988) reported 0.04% and Hoque and Samad(1996) reported 2.17% incidence of BQ in cattle from different geographical location in Bangladesh.

**Papillomatosis**
This study recorded 0.7% cases of papillomatosis in cattle (Table 1). This findings support the reports of Nooruddin and Dey (1990), Samad (2001) and Rahman *et al.* (2012) reported and 0.7%, 0.58% and 0.19% prevalence of warts in cattle from Bangladesh, respectively. However, Nooruddin *et al.* (1986) reported 3.04% prevalence of warts under rural cattle.

**PPR**
This study recorded 5.3% cases of PPR in goats (Table 1). This finding support the finding of Rahman *et al.* (2012) who reported 5.2% PPR cases in goats.

**Tetanus**
This study recorded 0.5% cases of tetanus in goats (Table 1). This finding support the finding of Samad (2001) and Rahman *et al.* (2012) reported 1.1% and 5.2% PPR cases in goats.

**Mastitis**
Mastitis 1.1% and 1.6% was diagnosed in cows and does (Table 1). The findings support 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. Nooruddin *et al.* (1986) and Rahman *et al.* (1999) also reported 0.37% and 0.65% clinical mastitis in cows.

**Gynaeco-obstetrical cases**

**Retained placenta**
This disorder was recorded only in 30% cows and 50% does (Table 1). This findings is 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.

**Repeat breeding**
Repeat breeders are those female ruminants that fail to conceive after three or more regularly spaced services in the absence of detectable abnormalities of the internal genitalia (Samad, 2000). This disorder was recorded in 70.0% cattle and 50.0% goats (table 1). These findings support the observation of Rahman *et al.* (1975) and Hossain *et al.* (1986) who reported 22.0% and 63.0% incidence of repeat breeding syndrome among the reproductive disorders in cattle, respectively. However, Rahman *et al.* (1999) and Samad (2001) reported 0.64% cattle and 1.26% and 0.24% prevalence of repeat breeder cattle and goats.
Table 1. Clinical prevalence of diseases and disorders in cattle and goats recorded at Upazilla Veterinary Hospital, Mohammadpur, Magura

<table>
<thead>
<tr>
<th>S/N</th>
<th>Diseases</th>
<th>Cattle (n = 327)</th>
<th>Goats (n = 209)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. of affected</td>
<td>Percentage (%)</td>
<td>No. of affected</td>
</tr>
<tr>
<td></td>
<td>cattle</td>
<td></td>
<td>goats</td>
</tr>
<tr>
<td>1.</td>
<td>Fever</td>
<td>22</td>
<td>24</td>
</tr>
<tr>
<td>2.</td>
<td>Anorexia</td>
<td>4</td>
<td>14</td>
</tr>
<tr>
<td>3.</td>
<td>Bloat</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>4.</td>
<td>Digestive disorder (Diarrhoea)</td>
<td>38</td>
<td>37</td>
</tr>
<tr>
<td>5.</td>
<td>Dysentry (Coccidiosis)</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>6.</td>
<td>Respiratory disorder (Pneumonia)</td>
<td>2</td>
<td>18</td>
</tr>
<tr>
<td>7.</td>
<td>Corneal opacity</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>8.</td>
<td>Mange</td>
<td>13</td>
<td>10</td>
</tr>
<tr>
<td>9.</td>
<td>Fascioliasis</td>
<td>35</td>
<td>3</td>
</tr>
<tr>
<td>10.</td>
<td>Paramphistomiasis</td>
<td>25</td>
<td>5</td>
</tr>
<tr>
<td>11.</td>
<td>Gastrointestinal nematodiasis</td>
<td>107</td>
<td>37</td>
</tr>
<tr>
<td>12.</td>
<td>Ectoparasitism</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>13.</td>
<td>Humpsore</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>14.</td>
<td>Foot and Mouth Disease</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>15.</td>
<td>Black quarter</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>16.</td>
<td>Papillomatosis</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>17.</td>
<td>PPR</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>18.</td>
<td>Tetanus</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>19.</td>
<td>Mastitis</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Sub-total (Medicinal cases)</td>
<td><strong>283</strong></td>
<td><strong>86.5</strong></td>
<td><strong>189</strong></td>
</tr>
<tr>
<td>1.</td>
<td>Retained placenta</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>2.</td>
<td>Repeat breeders</td>
<td>14</td>
<td>1</td>
</tr>
<tr>
<td>Sub-total (Gynaeco-obstetrical cases)</td>
<td><strong>20</strong></td>
<td><strong>6.1</strong></td>
<td><strong>2</strong></td>
</tr>
<tr>
<td>1.</td>
<td>Abscess</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>2.</td>
<td>Myiasis</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>3.</td>
<td>Navel ill</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>4.</td>
<td>Gid disease</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>5.</td>
<td>Urolithiasis</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>6.</td>
<td>Overgrown Hoof</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>Sub-total (Surgical cases)</td>
<td><strong>24</strong></td>
<td><strong>7.3</strong></td>
<td><strong>18</strong></td>
</tr>
<tr>
<td>Overall</td>
<td><strong>327</strong></td>
<td><strong>61.0</strong></td>
<td><strong>209</strong></td>
</tr>
</tbody>
</table>

Surgical cases

Abscess

Abscess was recorded in 45.8% cattle and 5.6% goats (Table 1). Rahman et al. (2012) reported 1.1% cattle and 1.3% goats affected with abscess at Patuakhali Science and Technology University Veterinary Clinic, Babugonj, Barisal. Hossain et al. (1986) who recorded 1.2% cases of abscess in cattle and of Samad (2001) who reported 1.56% abscess cases in goats.

Myiasis

Myiasis was recorded in 20.8% cattle and 11.1% goats (Table 1). This observation supports the report of Rahman et al. (2012) who reported 24.7% cattle and 16.4% goats affected with myiasis. Prevalence of 11.0% (Rahman et al., 1972), 1.07% (Nooruddin et al., 1986) and 2.20% (Das and Hashim, 1996) of maggot-infested wounds has been reported in cattle from Bangladesh.

Navel-ill

Navel-ill was recorded only in 12.5% calf (Table 1). This observation supports the report of Rahman et al. (2012) who reported 10.1% navel-ill in calves. Das and Hashim (1996) reported 6.40% navel-ill in calves. However, Samad (2001) recorded 0.79% and 0.62% navel-ill cases in calves and kids, respectively.
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Gid disease
Gid disease was recorded only in one goat 5.6% (Table 1). Samad (2001) and Rahman et al. (2012) recorded 5.38% and 2.5% gid disease in goats.

Urolithiasis
Urolithiasis was recorded in 20.8% cattle and 44.4% goats (Table 1). Samad (2001) and Rahman et al. (2012) reported very low percentage (0.02%) and (1.1%) of obstructive urolithiasis in cattle.

Overgrown Hoof
Overgrown hoofs were recorded only in 33.3% goats during this study period (Table 1). Samad (2001) reported 0.70% in goats and 0.02% cases of overgrown hoofs in cattle. Nooruddin et al. (1986) reported 1.12% prevalence of overgrown hoofs in cattle.

CONCLUSION
Occurrence of diseases was recorded during clinical examination of sick cattle and goats at Upazila Veterinary Hospital, Mohammadpur, Magura, Bangladesh. This study was conducted to detect the present situation of occurrence of clinical diseases and disorders in the study area. From the study, it was observed that both cattle and goats were most susceptible to parasitic infestation. Parasitic infestation causes heavy economic losses in every year. So, regular anthelmintics treatment should be given to control the parasitic diseases. The district has border area as a result diseases like FMD and PPR were frequently outbreaks in cattle and goat respectively. So restriction of movement and frontier vaccination program must be undertaken in border area. So, further research should be required to determine the accurate prevalence of disease and disorders in cattle and goat. Proper planning and program should be undertaken to prevent and control diseases and disorders of cattle and goat in the study area.

REFERENCES
Prevalence of Diseases and Disorders in Cattle and Goats


