



Research Article

Prevalence of Cattle Diseases and Surgical Cases in Tangail District, Bangladesh

Md. Kamruzzaman Akimul^{1*}, Mukim Mahmud², Arobi Jahan Disha¹, Md. Sabbir Ahmed Shuvo²

¹Department of Microbiology and Public Health, Faculty of Animal Science and Veterinary Medicine, Patuakhali Science and Technology University, Babuganj, Barishal-8210, Bangladesh; ²Department of Animal Nutrition, Faculty of Veterinary, Animal and Biomedical Sciences, Sylhet Agricultural University, Bangladesh.

Abstract | Cattle farming plays a significant role in rural livelihoods and the national economy of Bangladesh. The objective of this study was to find out the prevalence of common diseases and surgical cases in cattle in Tangail District, Bangladesh and evaluate their distribution with aging and sex. A total of 679 clinically affected cows and 291 post-operative cases were examined from January to June 2024 based on clinical history and physical examination. The most common disease was Foot-and-Mouth Disease (27.25%) which was followed by fascioliasis (16.94%), Lumpy Skin Disease (13.25%) and digestive disorders (10.16%). Most surgical cases were related to wounds (32.30%), navel ill (20.62%) and abscesses (13.06%). The digestive and congenital disorders such as hernia and atresia ani were more prevalent in calves whereas mastitis, anestrus, and reproductive disorders were prevalent in cows. These results emphasize the need to use region-specific disease control methods, timely veterinary treatment and farmer enlightenment programs in order to improve animal health, productivity in rural Bangladesh.

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***Correspondence** | Md. Kamruzzaman Akimul, Department of Microbiology and Public Health, Faculty of Animal Science and Veterinary Medicine, Patuakhali Science and Technology University, Babuganj, Barishal-8210, Bangladesh; **Email:** akimul315512@gmail.com

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Keywords | Cattle diseases, Surgical cases, Prevalence, FMD, Tangail District, Bangladesh



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Introduction

The livestock farming sector is an important part of the agricultural system of Bangladesh and plays a crucial role as an input into the national economy and income-earning activities of the rural population. The livestock sub-sector is estimated to contribute about 16.33% of the aggregate agricultural GDP, 1.80% of the national GDP and 3.15% GDP growth

rate (Department of Livestock Services-DLS, 2023-2024).

Numerous diseases that because substantial economic losses include Foot-and-Mouth Disease (FMD), Black Quarter (BQ), Papillomatosis, Lumpy Skin Disease (LSD), skin diseases, hernia, and various surgical conditions. FMD is caused by the *Aphthovirus* genus (*Picornaviridae* family) and

has seven serotypes namely: A, O, C, Asia 1, SAT1, SAT 2 and SAT 3. The economic implication of FMD is enormity because of high morbidity and mortality (Rahman *et al.*, 2025). Black quarter (BQ) is an infectious disease in cattle and small ruminants around the world caused by Gram positive anaerobe bacterium, *Clostridium chauvoei*. *Clostridium chauvoei* is the pathogen that leads to deadly black quarter infection in bovines and buffaloes (Kumar *et al.*, 2018). The most frequently infected locations were the teats and the neck but warts were observed in other parts of the body (Hamad *et al.*, 2018). Lumpy skin disease (LSD), which is known to be affecting various parts of the world, has been said to cause economic destruction in livestock markets with higher morbidity cases and lower mortality cases reported in cattle. Lumpy skin disease virus is the cause of LSD; it belongs to the *Poxviridae* family (Akther *et al.*, 2023). The causes of skin diseases were primarily related to ectoparasites that infested cattle in a relatively privileged manner and the highest infestation rate of the study area was related to tick infestation among ectoparasites (Happy *et al.*, 2016). The prevalence of digestive disorders in cattle is not specifically defined because some studies showed high percentages and others low percentages but it is a major health issue affecting the Bangladesh cattle. Stomach related troubles, such as diarrhea and gas and indigestion. A significant diseased occurrence to the rectum and little colon of the domestic animals is the rectal prolapse (Anderson and Miesner, 2008). In addition, the surgical cases which are present in the bulls, calves and cow are age and sex related.

Determination of the distribution of diseases in a particular area is crucial prior to the onset of formal health interventions or design of successful control strategies. Clinical case record analysis on prevalence gives an idea about the most typical clinical problems and demographic trends related to them in that region. The aim of this study was to determine the prevalence and types of major clinical diseases and surgical cases affecting cattle in Tangail District, Bangladesh.

Objectives of the study

- To investigate the prevalence and types of major clinical diseases and surgical cases affecting in the cattle of Tangail District in Bangladesh.
- To identify the demographic distribution (age and sex) of cattle affected by these conditions.

Materials and Methods

Study area and study period

The study presented as a clinical study in the Tangail District during 6 months between January and June 2024 to gain an overview of the prevalence of diseases and disorders in cattle. Figure 1 shows the map of the study area.

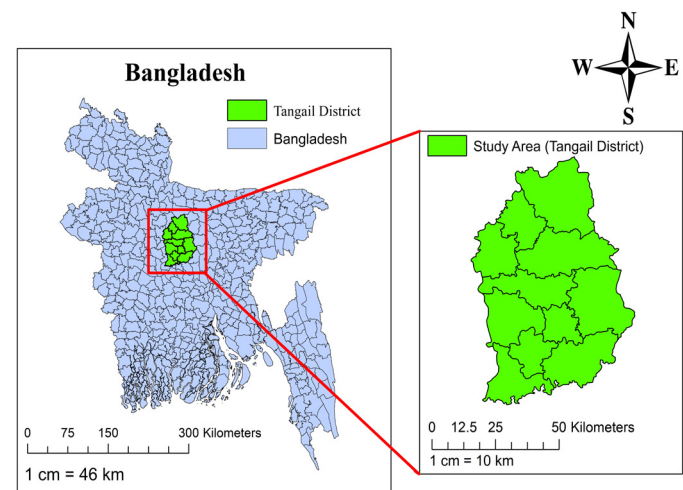


Figure 1: Study Area (Tangail District, Bangladesh).

General examination

General physical condition, behavior, posture, gait, simple skin wound, drop of the uterus and vagina, salivation, nasal discharge, abdomen distension, locomotive disturbance etc. could be ascertained by visualizing the patient.

Physical examination

Palpation, percussion, auscultation, diagnostic needle puncture (for fluid or sample collection), and observation of animal movement were used to examine various body systems of all sick animals.

Clinical examination

The temperature, pulse rate and rate of respiration of all these ill animals were observed. Distribution of clinical examination of Cows, Bull and Bullock was done in respect of diseases history, owner complaint, and symptoms to diagnose various diseases and disorders given below. Careful taking in of history of each case (Present and past) was taken as a guideline in examination of the animals. After the merit of the individual case general clinical examinations were performed on the basis of the history of the disease and owners' complaint, symptoms and methods like microscopic examination etc. were taken.

Fever

Fever was diagnosed based on recorded rectal temperature. An abnormal rise in body temperature (above 103 °F or 39 °C) is referred to as fever.

Anorexia

The diagnosis of anorexia syndrome was based on the owner's complaint and a history of complete or partial loss of appetite, including reduced food intake.

Gastro-intestinal diseases

Non-parasitic cases were based on a negative result of the parasitic infection and the absence of parasitic infection as seen in the owner-reported history of regular anthelmintic administration.

Respiratory disorders

This disorder has been diagnosed based on the complaint of the owner and recording abnormal functions of respiratory system such as polypnoea, dyspnea, coughing, sneezing, nasal discharging, thoracoabdominal breathing etc. and based on examining the whole respiratory tract.

Skin diseases

Clinical diagnosis of different type discrete and diffuse skin lesions was carried out by visual examination.

Mastitis

Mastitis is one of the prevalent bacterial illnesses in dairy cows; it targets the dairy udder and decreases the quality and quantity of milk. It is infected by pathogens e.g., *Staphylococcus*, *Streptococcus* and *E. coli*. Clinical signs are hot, swollen painful udders, coagulated or colored milk and decreased milk production. The poor cow can get fever, loss of appetite and depression, in extreme cases. Subclinical mastitis lacks external manifestations but may be apprehended using somatic cell side tests. The prevention of complications and the loss in dairy farms can be prevented by early diagnosis and treatment.

Common viral diseases in cattle

Cattle is susceptible to various viral diseases which result into a significant loss to the economy. FMD is very contagious and it is characterized by fever, salivation and blisters on the mouth, tongue, and hooves. LSD is a disease described by fever, enlarged lymph nodes and solid nodules on the skins. The affected animals can also be lame and have low milk output. Bovine papillomavirus causes papillomatosis

that results in wart-like skin and mucous membrane lesions. The diseases hamper production and risk spreading and high costs unless diagnosed early, isolated and treated supportive.

Black quarter in cattle

Black quarter is a fatal bacterial disease caused by *Clostridium chauvoei*. It commonly affects young cattle, especially during the rainy season. Clinical signs include sudden lameness, high fever, swelling in the hip or shoulder muscles, and crepitation under the skin. Death may occur within 12–48 hours.

Parasitological diseases

Diseases caused by protozoa like hump sore (Stephanofilariasis), fascioliasis, and paramphistomiasis used to be diagnosed according to case history, clinical symptoms, and rectal analysis. These were the common conditions and they represented a large percentage of cases in the study period.

Repeat breeding syndrome and anestrus in cattle

Pregnancy diseases have a great impact on the fertility of cattle and farm productivity. Repeat Breeding Syndrome refers to cows that fail to conceive after multiple normal estrous cycles and regular insemination, despite showing no apparent reproductive abnormalities. The signs are periodic signs of heat and the inability to get pregnant. Absence of estrus or heat cycles called anestrus is frequently caused by poor nutrition, hormone imbalance or post-partum problems. Affected cows do not exhibited signs of heat which can include restlessness as well as vaginal discharge. These reproductive disorders can be treated and prevented with proper management including balanced nutrition, detection of heat and hormonal therapy.

Results

Prevalence and statistical analysis cattle diseases

Among 679 cattle clinically examined, the following diseases were observed (absolute values): FMD (185), Black quarter (4), Papillomatosis (23), LSD (90), Mastitis (14), Hump Sore (24), Digestive Disorders (69), Respiratory Disorders (58), Skin Diseases (65), Fascioliasis (115), Repeat Breeding Syndrome (13), and Anestrus (19). The lowest was Black Quarter (0.59%), and the highest was FMD (27.25%) (Table 1, Figure 2).

Table 1: Overall prevalence of cattle diseases.

Diseases name	No. of affected animal	Prevalence (%)
FMD	185	27.25%
Black quarter	4	0.59%
Papillomatosis	23	3.39%
LSD	90	13.25%
Mastitis	14	2.06%
Hump sore	24	3.53%
Digestive disorder	69	10.16%
Respiratory disorder	58	8.54%
skin diseases	65	9.57%
Fascioliasis	115	16.94%
Repeat breeding syndrome	13	1.91%
Anestrus	19	2.80%
Total	679	100%

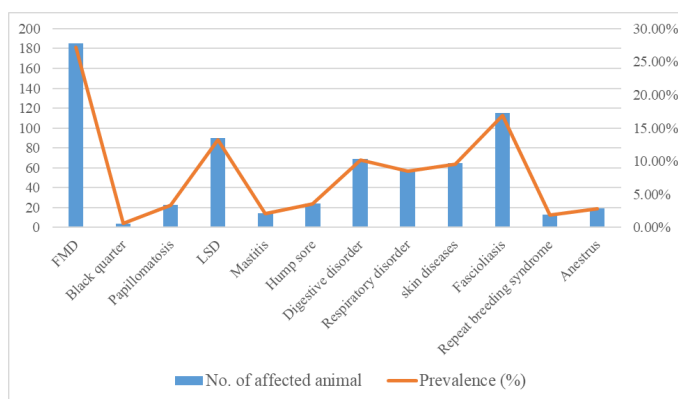


Figure 2: Number of affected animal and overall prevalence of cattle diseases.

Prevalence of diseases in calves, bulls, and cows

Cows were most affected by FMD (30.12 %), but Black quarter, Papillomatosis, digestive disorders, and

Fascioliasis were more frequent in calves, probably because of low immunity and risk of exposure. LSD, Hump sore and respiratory disorders were seen at higher levels in Bulls, this could be due to housing or stress. Bulls and cows had similar skin diseases and were lower in calves. Only cows had reproductive problems, anestrus (7.63%), mastitis (5.62%), and repeat breeding (5.22%), which is related to the reproductive nature in cows. These trends indicate that age and sex affect the distribution of disease (Table 2).

Prevalence of cattle surgical cases

A total of 291 cattle were examined, among which 38, 34, 20, 60, 5, 94, and 10 cattle were affected by abscess, fracture, hernia, navel ill, rectal prolapse, wound, and teat fistula, respectively. In the present study, the overall prevalence of wound was the highest (32.30%) among all surgical cases, while rectal prolapse had the lowest prevalence (1.72%) (Table 3, Figure 3).

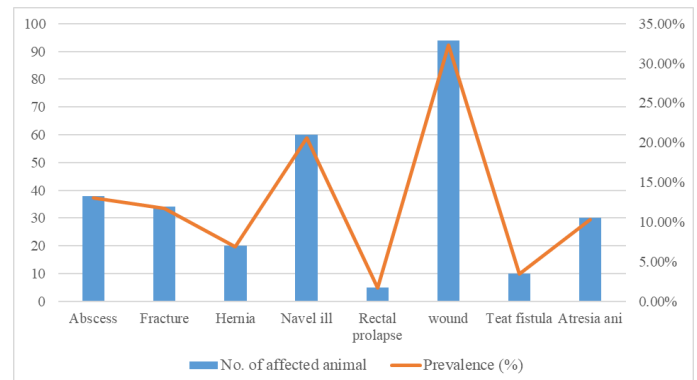


Figure 3: Number of affected animal and overall prevalence of cattle surgical cases.

Table 2: Comparative prevalence and statistical analysis of diseases in calves, bulls, and cows.

Diseases name	In case of calf		In case of bull		In case of cow		Chi-square test	P-value
	No. of calves affected	Calf disease prevalence (%)	No of bulls affected	Bull disease prevalence (%)	No. of Cows affected	Cow disease prevalence (%)		
FMD	50	23.58%	60	27.52%	75	30.12%	5.14	0.076
Black quarter	2	0.94%	1	0.46%	1	0.40%	0.50	0.78
Papillomatosis	16	7.55%	5	2.29%	2	0.80%	14.17	0.0008*
LSD	20	9.43%	40	18.35%	30	12.05%	6.67	0.036*
Mastitis	-	-	-	-	14	5.62%	-	-
Hump sore	-	-	15	6.88%	9	3.61%	1.50	0.221
Digestive disorder	41	19.34%	11	5.05%	17	6.83%	21.91	0.0000174*
Respiratory disorder	21	9.91%	25	11.47%	12	4.82%	4.59	0.1010
Skin diseases	15	7.08%	23	10.55%	27	10.84%	3.44	0.179
Fascioliasis	47	22.17%	38	17.43%	30	12.05%	3.77	0.152
Repeat breeding syndrome	-	-	-	-	13	5.22%	-	-
Anestrus	-	-	-	-	19	7.63%	-	-
Sub-total	212		218		249			

N.B.: $p \leq 0.05$ is statistically significant (*).

Comparative prevalence and statistical analysis of surgical cases in calves, bulls, and cows

The prevalence of abscess was highest in bulls (40.00%) compared to calves (9.41%) and cows (10.99%). Hernia, atresia ani and navel ill were observed exclusively in calves, with prevalence rates of 11.76%, 17.65%, and 35.29%, respectively. Rectal prolapse and teat fistula were recorded only in cows, with prevalence rates of 5.49% and 10.99%, respectively. The prevalence of wounds was moderately higher in bulls (60.00%) compared to calves (20.00%) and cows (46.15%) (Table 4).

Table 3: Overall prevalence of cattle surgical cases.

Surgical cases	No. of affected animal	Prevalence (%)
Abscess	38	13.06%
Fracture	34	11.68%
Hernia	20	6.87%
Navel ill	60	20.62%
Rectal prolapse	5	1.72%
wound	94	32.30%
Teat fistula	10	3.44%
Atresia ani	30	10.31%
Total	291	100%

Discussion

FMD

The overall prevalence of Foot-and-Mouth Disease (FMD) in the present study was 27.25%. Among different cattle categories, the prevalence was highest in cows (30.12%), followed by bulls (27.52%) and calves (23.58%). In a cross-sectional study conducted in the haor areas of the Sylhet division, 343 FMD-positive cases were reported out of 1,388 cattle,

resulting in a prevalence of 24.71% during the period from July 2017 to June 2018 (Chowdhury *et al.*, 2019). Another study found significantly higher FMD prevalence in bulls (43.3%), compared to cows (35.1%) and calves (28.8%) (Chowdhury *et al.*, 1993). Similarly, Sorwar *et al.* (2016) reported the prevalence of FMD as 34.28% in bulls, 31.11% in cows, and 29.85% in calves. National reviews have confirmed that FMD remains endemic in Bangladesh, with tens of thousands of cases recorded between 2014 and 2017 (Samad, 2019).

Black quarter

The overall prevalence of Black quarter (BQ) in the present study was 0.59%. The disease was more prevalent in calves (0.94%) compared to bulls (0.46%) and cows (0.40%). In contrast, the prevalence of blackleg was reported as high as 16.73% in some studies. In a study by Karim *et al.* (2014), BQ was recorded in 1.4% of cattle. Meanwhile, another study found that blackleg was more common in male cattle, with a prevalence of 24.80% (Islam *et al.*, 2024).

Papillomatosis

The overall prevalence of Papillomatosis in the present study was 3.39%. The disease was more prevalent in calves (7.55%) than in bulls (2.29%) and cows (0.80%), with a statistically significant P-value of 0.0008. This finding is consistent with another study, which reported that young cattle were more susceptible to papillomatosis (Mathewos *et al.*, 2021).

LSD

In the present study, the overall prevalence of Lumpy Skin Disease (LSD) was recorded at 13.25%, which aligns with findings from other endemic regions.

Table 4: Comparative prevalence of surgical cases in calves, bulls and cows.

Surgical cases	In case of calf		In case of bull		In case of cow		Chi-square test	P-value
	No. of calves	Calf Surgical cases prevalence (%)	No of bulls	Bull Surgical cases prevalence (%)	No. of Cows	Cow surgical cases prevalence (%)		
Abscess	16	9.41%	12	40%	10	10.99%	1.47	0.479
Fracture	10	5.88%	-	-	24	26.37%	5.76	0.016*
Hernia	20	11.76%	-	-	-	-	-	-
Naval ill	60	35.29%	-	-	-	-	-	-
Rectal prolapse	-	-	-	-	5	5.49%	-	-
Wound	34	20.00%	18	60%	42	46.15%	9.53	0.0085*
Teat fistula	-	-	-	-	10	10.99%	-	-
Atresia ani	30	17.65%	-	-	-	-	-	-
Sub-Total	170		30		91		-	-

N.B.: $p \leq 0.05$ is statistically significant (*).

This rate is notably higher than the 4.13% reported by [Ansari et al. \(2024\)](#) but lower than the 51.63% reported by [Shake and Akimul \(2025\)](#). Variations in prevalence were observed across different age and sex groups. Bulls exhibited the highest prevalence (18.35%), followed by cows (12.05%) and calves (9.43%), with a statistically significant P-value of 0.036. Supporting this, [Faris et al. \(2021\)](#) reported that animals aged 1–2 years and over 2 years had higher LSD prevalence rates (42.2% and 34.9%, respectively) compared to animals under one year of age (26.3%).

Mastitis

In this study, the overall prevalence of mastitis was recorded at 2.06%, with cows specifically showing a prevalence of 5.62%. In comparison, a study by [Lucky et al. \(2016\)](#) reported a much higher prevalence of 47.83% in cattle, while [Karim et al. \(2014\)](#) found a significantly lower prevalence of 1.1% in cows. Additionally, the prevalence of clinical mastitis in cows was reported as 0.9% by [Samad \(2019\)](#) and 0.89% by [Rahman et al. \(2012\)](#).

Hump sore

The overall prevalence of hump sore in the present study was 3.53%. Although both bulls and cows were affected, the condition was more prevalent in bulls (6.88%) compared to cows (3.61%). A study by [Lucky et al. \(2016\)](#) reported a hump sore prevalence of 5.44% in cattle, with infection rates of 29.25% in males and 21.84% in females.

Digestive disease

The overall prevalence of digestive diseases was 10.16%, with calves showing a significantly higher prevalence (19.34%) than bulls (5.05%) and cows (6.83%) ($P = 0.0000174$). One study reported a digestive disorder prevalence of 32.68% ([Hasan and Hossain, 2016](#)), while another recorded a higher prevalence of 47.05% ([Ullah et al., 2015](#)). At the BAU dairy farm, calves showed relatively higher rates of digestive diseases, including diarrhea (25.2%), parasitic infestation (14.82%), and anorexia (12.31%) ([Hasan et al., 2017](#)). Conversely, another experiment found that the prevalence of digestive diseases was highest in cows (41.66%), followed by bulls (35.41%) and calves (22.91%) ([Ullah et al., 2015](#)).

Respiratory disease

The overall prevalence of respiratory disease in the present study was 8.54%. Although respiratory disease

was more prevalent in bulls (11.47%) compared to calves (9.91%) and cows (4.82%), another study reported a different pattern, with the highest prevalence in calves (52.63%), followed by bulls (26.31%) and cows (21.05%). The overall prevalence of respiratory disorders in that study was 6.2% ([Ullah et al., 2015](#)).

Skin diseases

The overall prevalence of skin diseases in the present study was 9.57%, with similar rates observed in bulls (10.55%) and cows (10.84%), compared to a lower prevalence in calves (7.08%). One study reported that the prevalence of skin diseases was significantly higher in females (80.83%) than in males (62.50%), based on a sample of 412 females and 208 males, and also varied by age groups: 174 young, 241 adults, and 205 old animals. Furthermore, [Happy et al. \(2016\)](#) recorded an overall skin disease prevalence of 74.68% (463 cases) in cattle.

Fascioliasis

The overall prevalence of fascioliasis in the present study was 16.94%, with a higher prevalence observed in calves (22.17%) compared to bulls (17.43%) and cows (12.05%). In the Nile Delta region of Egypt, the overall prevalence of fascioliasis was reported as 9.77%, with the highest prevalence in animals younger than 2 years (10.91%) and the lowest prevalence in animals older than 3 years (8.35%) ([El-Tahawy et al., 2017](#)). Conversely, another study found a significantly higher prevalence in females (33.9%) than in males (13.1%), with age having a significant influence; animals aged 8–10 years showed the highest prevalence at 39.3% ([Atanga et al., 2024](#)).

Repeat breeding syndrome

The overall prevalence of repeat breeding syndrome in the present study was 1.91%, with the condition mainly affecting cows (5.22%). One study reported a repeat breeding prevalence of 1.26% in cattle ([Samad, 2019](#)). Another study found a total prevalence of 7.29% in cows in Mekelle city ([Mandefro et al., 2014](#)). In Bangladesh, the overall prevalence of repeat breeding in commercial dairy cows in Chittagong was reported as 11.3% ([Nath et al., 2016](#)).

Anestrus

The overall prevalence of anestrus in the present study was 2.80%, with a higher prevalence of 7.63% observed in cows compared to other diseases. Other

studies have reported a prevalence of postpartum anestrus at 36.20% (Dutta *et al.*, 2023) and 54.42% (Nishi *et al.*, 2024). Additionally, anestrus was found mostly in female cattle (23.52%) according to Lucky *et al.* (2016).

Abscess

The overall prevalence of abscess in the present study was 13.06%, with the highest prevalence recorded in bulls (40%), followed by cows (10.99%) and calves (9.41%). One study reported that 72.66% of abscess cases can be successfully treated either medically or surgically (Abdel-Kawy *et al.*, 2015). Additionally, Karim *et al.* (2014) recorded an overall abscess prevalence of 45.8% in cattle. Several studies have reported the prevalence of umbilical abscesses in calves as 14.38%, 15.28%, and 14.27%, depending on the region. These studies also noted a higher occurrence of umbilical abscesses in male calves (54%) compared to females (46%), which is comparable to the findings of the present study (Islam *et al.*, 2021).

Fracture

Fractures had an overall prevalence of 11.68%, occurring significantly more in cows (26.37%) than in calves (5.88%) ($P = 0.016$). In contrast, a study by Islam *et al.* (2021) reported fracture prevalence in calves ranging from 8.61% to 10.49%, depending on the area, and found that fractures were more common in males (54%) than in females (46%).

Hernia

The overall prevalence of hernia in the present study was 6.87%, with the highest prevalence observed in calves (11.76%). One study reported a higher incidence of umbilical hernia in female calves (Sutradhar *et al.*, 2009). However, paradoxically, another study found that umbilical hernia was more common in male calves (61%) than in females (39%) (Islam *et al.*, 2021). Additionally, the prevalence of umbilical hernia in calves varied by area, recorded as 19.45%, 17.78%, and 17.62% in different regions (Islam *et al.*, 2021).

Navel ill

The overall prevalence of navel ill in the present study was 20.62%, with the highest prevalence observed in calves (35.29%). One study reported an overall prevalence of 12.5% for navel ill in cattle (Karim *et al.*, 2014). Another study found the prevalence of navel ill in calves to be 15.75%, 15.79%, and 16.08%,

depending on the area. Additionally, the prevalence was higher in male calves (53.0%) compared to females (47%) (Islam *et al.*, 2021).

Rectal prolapse

The overall prevalence of rectal prolapse in the present study was 1.72%, with the highest prevalence observed in cows (5.49%) compared to calves and bulls. One study reported a prevalence of 3.92%, noting that all cases were directly or indirectly associated with stress-related factors. Upon removal of these stressors, natural resolution occurred in 69% of rectal prolapse cases (Leleu *et al.*, 2024). Another study identified body condition score as a potential risk factor for the occurrence of rectal prolapse in calves (Samy *et al.*, 2022).

Rectal prolapse (RP) is an important diseased condition of the rectum and small colon in the domestic animals (Anderson and Miesner, 2008). Although RP can occur in all species of domestic animals, its common occurrence was recorded in cattle and small ruminants (Anderson and Miesner, 2008). Prolapse of the rectal mucosa occurs following straining, which may be associated with tenesmus (as occurs with coccidiosis and colitis), dysuria (as a complication of cystitis, urolithiasis, dystocia, and neoplasia), chronic coughing (as a complication of bovine respiratory disease), or may be associated with other factors including neoplasia, diet (e.g., clover and high estrogenic compound feedstuff, such as soybean meal), and various toxins (Steiner, 2016). RP may be partial (incomplete) where rectal mucosa is everted externally beyond the level of the anus or complete, in which a full thickness layer.

Wound

Wounds had an overall prevalence of 32.30%, with significantly higher occurrence in bulls (60.00%), followed by cows (46.15%) and calves (20.00%) ($P = 0.0085$). Previous studies have reported varying results. Alam *et al.* (2010) recorded a much higher prevalence of 84%, while Biplob and Alam (2023) reported a significantly lower prevalence of 4.68%. Additionally, Noman *et al.* (2013) found that wounds affected 3.6% of cattle, with a higher prevalence in younger animals and females.

Teat fistula

The overall prevalence of teat fistula in the present study was 3.44%, with the condition occurring most

frequently in cows (10.99%). One study reported a prevalence of 2.35% in cattle (Lucky *et al.*, 2016).

Atresia ani

The overall prevalence of atresia ani in the present study was 10.31%, with the condition occurring most frequently in calves (17.65%) compared to bulls and cows. A study by Islam *et al.* (2021) reported that the prevalence of atresia ani was higher in males (60%) than in females (40%). Similarly, Hossain *et al.* (2014) found that 71.74% of indigenous calves were affected by atresia ani, while 28.26% of cases were observed in crossbred calves. Although one study indicated that surgical conditions are more commonly observed in male calves than females likely due to their anatomical structure increasing susceptibility to conditions such as navel ill (Rassel *et al.*, 2021) and umbilical abscesses (Hoda *et al.*, 2018b; Talukder *et al.*, 2018) our findings revealed that abscesses and wounds were predominantly found in bulls, while a broader range of surgical conditions primarily affected calves. Exceptions were rectal prolapse and teat fistula, which were mostly observed in cows.

Conclusions

Most common clinical cases in the cattle were found to be FMD, Fascioliasis and digestive disorders whereas wounds, navel ill and atresia ani were the most frequent surgical cases in the Tangail District of Bangladesh. Age and sex also had compelling impacts on the duplication of diseases whereby calves were more disposed to digestive and newborn diseases. These results highlight the importance of region-specific disease prevention measures, deworming frequency, enhanced hygiene and suitable surgical intervention and farmer education to increase cattle health and mitigate production losses in the region.

Acknowledgement

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Novelty Statement

This is the first study to give a report on both cattle diseases and surgical cases in cattle that are prevalent

in Tangail district, Bangladesh. The results present baseline epidemiologic information which can be used by veterinary practitioners and policymakers in designing meaningful disease prevention and management interventions.

Author's Contribution

Conceptualization: MKA, MM.

Data curation: MKA, MM, AJD, MSAS.

Data analysis: MKA, MM, AJD.

Wrote the original draft: MKA, MM, AJD, MSAS.

Review and editing: MKA.

All authors read and approved the final manuscript.

Generative AI and AI-assisted technology statement

The authors report that no generative artificial intelligence (AI) or AI-supported technologies were applied in the writing, data analysis or preparation of this manuscript. The authors did all the work including study design, collection of data, statistical analysis, interpretation, and the preparation of the manuscript.

Conflict of interest

The authors have declared no conflict of interest.

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