

Short Communication

Occurrence of common surgical affections in calves and goats at Jhenidah Sadar Upazila of Bangladesh

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Abstract: The occurrences of different surgical affections are very common in Bangladesh. The aim of this study was to determine the occurrence of most common surgical affections and their risk factors in calves and goat at Jhenidah Sadar Upazila of Bangladesh during the period from July to December 2011. Thirty seven (37) calves and twenty two (22) goats were used for this study. All animals were brought to hospitals with the complaints of surgical conditions. In this study we found umbilical hernia (59.5%), umbilical abscess (10.8%), *atresia ani* (8.1%), intestinal prolapse (2.7%), fracture of jaw (2.7%), necrosis of eyeball (2.7%), congenital polypus (2.7%), naval myiasis (5.4%) and abscess (5.4%) in calves. In case of goats, gid disease (36.4%), testicular hernia (4.5%), subcutaneous cyst (13.6%), *atresia ani* (4.5%), myiasis (9.1%), block of urethra (4.5%), fracture (9.1%), stitch abscess (9.1%), abscess (4.5%) and hematocele (4.5%) were recorded. The young, male and crossbred calves were showed more affections than that of adult and female. It was also found that the young male goats were more significantly ($p < 0.05$) prone to surgical affections than that of adult and female. The male calf with 1-3 months of age (84.6%) were higher than that of male with age <1 month (70.8%). In both calf and goat, the female were found comparatively lower rate of surgical affections than male. However, further extensive work is very imperative to identify the specific cause as well as any factors that may influence region to region.

Keywords: surgical affections; Jhenaideh; hernia; myiasis

1. Introduction

The management practices of animals and geo-climatic conditions of Bangladesh are favorable for the occurrence of various diseases and disorders. The incidence of diseases varies with the species, age, sex of the animals and season of the year (Haque and Samad, 1997; Samad, 2001). Most of the diseases are treated with medicine only, while few cases need surgical intervention in clinical veterinary practice. The importance of surgery is to save the life of an animal, to prolong the life of an animal, to hasten recovery from an injury (Sarker *et al.*, 2014). Surgical affection like hernia, *atresia ani*, navel ill, myiasis, lameness and fracture cause great loss to the farmers of Bangladesh (Hossain *et al.*, 1986). In spite of obstacles, veterinary practitioners are often conducting minor surgical operations in calves and goat at field level in our country. Moreover, few surgical cases of pet animals and birds are practiced in urban area of our country. Surgical affections are classified as congenital and acquired. In calves most of the surgical affections are congenital where in goats most of the cases are acquired. A few works on surgical affections in calves and goats are done in Bangladesh

(Samad, 2000). Therefore, this study was designed to determine the prevalence of most common surgical affections and their risk factors in calves and goat at Jhenidah sadar upazila.

2. Materials and Methods

This study was carried out at Upazilla Livestock Office, Jhenidah sadar and Zilla Veterinary Hospital, Jhenidah during the period from 10 July 2011 to 08 December 2011. Thirty seven calves and 22 goats were used for this study. All animals were brought to hospitals with the complaints of surgical conditions.

3. Results and Discussion

3.1. Occurrence of various surgical affections in calves and goat

The detail result on the occurrence of surgical affections in calves and goat are shown in Tables 1 and 2. During the study period a total 59 numbers of calves and goats were examined for surgical purpose to determine the prevalence of surgical affections in calves and goats and to find out the effect of some factors (age, sex, and breed) on that case. It was observed that most prevalence surgical affections in calves at Jhenidah sadar is umbilical hernia (59.5%), second one is umbilical abscess (10.8%), third one is Atresia ani (8.1%) and number fourth is Naval myiasis and abscess (5.4%) . In goat most common surgical affections is Gid disease (36.4%, 8/22), second one is subcutaneous cyst (13.6%), and number third are stitch abscess, bone fracture, and vulvar myiasis (9.1%).

3.2. Effects of different variables on the occurrence of surgical affections in calves

3.2.1. Effects of age and sex

The effect of age and sex on the occurrence of surgical affections in calves is presented in Table 3. In male animals, the highest incidence (75.7%) of the disease occurred in calves of 1-3 months old.

Like male calves, the incidence rate (24.3%) of the disease in the female was also recorded in 1-3 months age group. The highest incidences (64.9%) was observed in calves under 1 month of age, while the lowest incidence rate (35.1%), was observed in 1-3 months age group.

3.2.2. Effect of breed

The effect of breed on the occurrence of umbilical hernia in calves is shown in Table 4. Out of 37 affected calves, 7 were desi and 30 were cross breed, the incidence of surgical affections in desi male (71.4%), female (28.6%), cross breed male (80%), and in female (20.0%). From this observation it was clear that cross bred calves (81.1%, 30/37) are more susceptible for surgical affections in compares to desi calves (18.9%, 7/37).

Among all surgical affections in calves umbilical hernia is also available at Jhenidah sadar like in Bangladesh. Calves between 1 and 3 months were most frequently affected with surgical cases. This observation about age and sex is agreeable to earlier reports (Rahman *et al.*, 2001). In Bangladesh diagnosis of the affection may be delayed because animals are reared in backward system and owners are either ignorant or have less interest for their management. Umbilical hernia is occurred predominantly in the male calves as compared to their female counterparts. This finding about age and sex is the agreeable with those of the report Das *et al.*, (1996) & Rahman *et al.*, (2001). Higher prevalence in males may be due to large swelling at umbilical region for preputial sheath. Preputial sheath of male animal always remains moist in the umbilical region and favours umbilical infection. The occurrence of navel ill is higher in rainy

season followed by summer and winter. This is probably due to muddy land, less exercise, and unhygienic floors (Huang *et al.*, 1995). These results are similar to umbilical affections in cattle reported by Sarker *et al.* (2013). During development of such large preputial sheath, the ventral abdominal wall may not be properly developed and leads to the formation of surgical affections before birth (Rahman *et al.*, 2001).

In the present study, occurrence of umbilical hernia was significantly high in the crossbred calves than that in the indigenous breed. The higher incidence in cross breed calves may due to preference of owners to inseminate their cows with these breeds. Pure Holstein cattle as well as the offspring of Holstein × indigenous cross are more likely to suffer from this congenital defect than the indigenous breed (Kohli, 1999).

Umbilical abscess and Naval ill causes Umbilical hernia in animals. In present study abscess is more responsible than naval ill.

3.3. Effects of different variables on the occurrence of surgical affections in goat

3.3.1. Effect of age and sex

The effect of age and sex on the occurrence of surgical affections in goat is presented in Table 5. In male animals, the highest incidence (72.7%) of the disease occurred in goat of 1-24 months of age, and the low

incidence rate (27.9%) of the disease in the female was also recorded in 1-24 months age group. In an average more surgical affections occurred in 6-24 months age (63.6%).

In goats Gid disease and subcutaneous cyst is more prevalent than other surgical cases because the parasitic infection is more in Jhenidah sadar like Bangladesh (Rahman *et al.*, 1983). The present study is agreeable with this information.

Table 1. Occurrence of surgical affections in calves.

Diseases	Prevalence rate [No. (%)]
Umbilical hernia	22 (59.5)
Umbilical abscess	4 (10.8)
Atresia ani	3 (8.1)
Intestinal prolapse	1 (2.7)
Fracture of jaw	1 (2.7)
Necrosis of eyeball	1 (2.7)
Congenital Polypus	1 (2.7)
Naval myiasis	2 (5.4)
Abscess	2 (5.4)

Table 2. Occurrence of surgical affections in goat.

Diseases	Prevalence rate [No. (%)]
Gid disease	8 (36.4)
Testicular hernia	1 (4.5)
Subcutaneous cyst	3 (13.6)
Atresia ani	1 (4.5)
Myiasis	2 (9.1)
Block of urethra	1 (4.5)
Fracture	2 (9.1)
Stitch abscess	2 (9.1)
Hematocele	1 (4.5)
Abscess	1 (4.5)

Table 3. Effect of age and sex on the occurrence of surgical affections in calf.

Age	Occurrence of surgical affections		
	Male [No. (%)]	Female [No. (%)]	Total [No. (%)]
< 1 month (n=24)	17 (70.8)	7 (29.1)	24 (64.9)
1-3 months (n=13)	11(84.6)	2 (15.4)	13 (35.1)
Total	28 (75.6)	9 (24.3)	37 (100)

N = number of animals

Table 4. Effects of breed on the occurrence of surgical affections in calves.

Breed	Occurrence of umbilical hernia		
	Male [No. (%)]	Female [No. (%)]	Total [No. (%)]
Desi (n=7)	5(71.4)	2(28.9)	7(18.9)
Cross (n=30)	24(80)	6(20)	30(81.1)
Total	29(78.4)	8(21.6)	37(100)

N= number of animals

Table 5. Effect of age and sex on the occurrence of surgical affections in goat.

Age	Occurrence of surgical affections		
	Male [No. (%)]	Female [No. (%)]	Total [No. (%)]
< 1 month (n=4)	3(75)	1(25)	4(18.2)
1-6 months (n=4)	3(75)	1(25)	4(18.2)
6-24 months (n=14)	10(71.4)	4(28.6)	14(63.6)
Total	16(72.7)	6(27.9)	22(100)

N= number of animal

4. Conclusions

It might be concluded that the umbilical hernia in calves was fairly prevalent at Jhenidah district. Most Surgical affections occurred mostly in calves of 1-3 months age group, in where >1 month of age is more prone to surgical affections. The prevalence of surgical affections is more common in male calves than that in female calves. The higher incidence of surgical affections was encountered in the cross bred calves in contrast to indigenous calves. In Goat, Gid disease is most prevalent at Jhenidah district. Goats >6 months of age, and male are more susceptible to surgical affections.

Conflict of interest

None to declare.

References

- Das BC and MA Hashim, 1996. Studies on surgical affections in calves. *Bangladesh Vet. J.*, 30: 53- 57.
- Hoque MS and MA Samad, 1997. Present status of clinical diseases of goats in the urban areas in Dhaka. *Bangladesh Vet. J.*, 31: 35-40.
- Hossain MA, M Shahidullah and MA Ali, 1986. Surgical disease and reproductive disorders recorded at the Veterinary Hospital of Bangladesh Agricultural University, Mymensingh, Bangladesh. *Bangladesh Vet. J.*, 20: 1-5.
- Kohli RN, 1999. Incidence of veterinary congenital defects in Iran. *Indian J. Ani. Sci.*, 69: 779-780.
- Rahman MH and MMH Mondol, 1983. Helminth parasite of cattle and goats in Bangladesh. *Indian J. Parasito.*, 2: 173-174.
- Rahman MM, D Biswas and MA Hossian, 2001. Occurrence of umbilical hernia and comparative efficacy of different suture materials and techniques for its correction in calves. *Pakistan J. Biol. Sci.*, 4: 1026-1028.
- Samad MA, 2001. Observations of clinical diseases in ruminants at the Bangladesh Agricultural University. *Veterinary Clinic. Bangladesh Vet. J.*, 35: 93-120.
- Samad MA, 2000. Clinical surgery In: *Veterinary Practitioner's Guide*. LEP publication, Dhaka. 399-412.
- Sarker NU, MM Rahman, MS Rana, MT Islam, UK Rima, 2013. Prevalence of surgical diseases of cattle in stall-fed and free-range cattle in Bangladesh. *Bangladesh Veterinarian*, 30: 62-69.
- Sarker NU, K Samaddar, MM Haq and MM Rahman, 2014. Surgical affections of cattle in the milk-shed areas of Bangladesh. *The Bangladesh Veterinarian*, 31: 38 – 45.