**CASE REPORT**
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# SUCCESSFUL MEDICAL MANAGEMENT OF ACUTE CYSTITIS IN A BEETAL GOAT- A CASE REPORT

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## ABSTRACT

A one-year-old Beetal male goat weighing around 45 kg was presented at the Teaching Veterinary Clinical Complex, CVAS, Pookode, Wayanad with a history of lethargy, abdominal distension, dysuria, stranguria, abdominal pain, groaning and falling down. General physical and laboratory examinations, ultra-sonographic imaging, and microbiological analysis were performed. Leucocytosis with moderate anaemia could be observed in haematological evaluation. Ultrasonographic imaging and microbial culture confirmed the case as acute cystitis. Systemic administration of antibiotics and oral supportive therapy helped the animal make an uneventful recovery.

**Keywords:** Acute cystitis; Beetal goat; ultrasonography

## INTRODUCTION

Diseases of the urinary system in goats have been less frequently reported in comparison to other ruminants (Kumar *et al*., 2013; Benavides *et al*., 2015). It is reported that acute cystitis in goats is characterized by stanguria, haematuria, presence of inflammatory cells and bacteria in the urine. Many bacterial species cause cystitis but predominantly reported by *Escherichia coli*, *Corynebacterium renale*, *Streptococcus* spp. and *Pseudomonas* spp. Urinalysis is a useful tool for diagnosis of urinary tract infections.

Acute cystitis can lead to pyelonephritis. This can occur after catheterisation of bladder for urine collection, after natural mating or as a sequelae of post-partum metritis in cows (Radostits *et al*., 2006; Braun *et al*.,

2008). Various bacterial agents have been identified in the urinary tract infections, although the reasons for infection are not known clearly (Braun *et al*., 2008; Kumar *et al*., 2013; Benavides *et al*., 2015).

## CASE HISTORY AND OBSERVATIONS

A one-year-old Beetal male goat weighing around 45 kg was presented at the Teaching Veterinary Clinical Complex, CVAS, Pookode, Wayanad with a history of lethargy, abdominal distension, dysuria, stranguria, pollakiuria, abdominal pain, groaning and falling down. On observation the hind limbs were stiff and on abdominal palpation a tensed abdomen could be felt. On general clinical examination, respiration, pulse and rectal temperature (respiratory rate: 24 breaths/min, pulse rate: 80 beats/min and rectal temperature: 39.8°C) were found in normal reference ranges.

On auscultation, cardiac sounds were extending to the lung area. Laboratory investigations like haematology, faecal sample, urinalysis, serum biochemistry and blood smear examination were conducted. No ova of parasites could be detected in the faecal sample. Leucocytosis with moderate anaemia were observed on haematological evaluation (Table 1). Blood smear examination was found to be negative for hemoprotozoal organisms. Serum biochemistry revealed low levels of serum calcium (7.16 mg/dL), phosphorus (3.39 mg/dL), normal levels of glucose (77mg/dL) and creatinine (1.09 mg/dL).

**Table 1:** Haematological parameters

| | |
|---|---|
| WBC | 15.0 X $10^3$/ µL |
| RBC | 16.75 X $10^6$/ µL |
| HGB | 7.5 gm/dl |
| HCT | 22.9% |
| MCV | 13.7 fL |
| MCH | 4.4pg |
| MCHC | 32.7 gm/dl |
| RDW | 19.2 % |

On urinalysis, ketone bodies were found to be negative and echocardiography revealed no abnormal findings. Abdominal ultrasound was done in right lateral recumbency and a double walled appearance of the urinary bladder could be observed. Urinary bladder was distended with urine (Fig.1) and nephromegaly were also detected. This indicated the ascending infection of kidneys as a

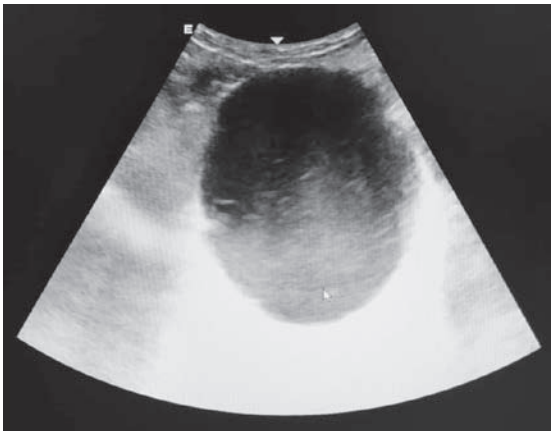

**Fig.1:** Ultrasonographic image of the distended bladder with double wall appearance suggestive of acute cystitis.

consequence of cystitis and the condition was clinically diagnosed as acute cystitis in this case. Urine samples were collected by catheterisation and sent for culture and sensitivity test, which revealed the presence of *E. coli* organisms. Antibiogram showed more sensitivity to the antibiotic enrofloxacin.

## TREATMENT AND DISCUSSION

The animal was treated with long acting enrofloxacin injection on alternate days at a dose rate of 5 mg/kg subcutaneously for 7 days. Supportive treatments like multivitamin inj., dicyclomine hydrochloride inj., oral mineral supplements and probiotics were given. The condition of the animal improved after a week and it made an uneventful recovery.

It is considered that the bacterial growth in acute cystitis may be due to long time urine retention or contamination of the urogenital system during artificial insemination or mating. In addition, the bacterial agents causing the urinary system disease may change due to environmental, geographical, and climatic differences from region to region. Early and prompt diagnosis gives the disease a good prognosis and being a basic and reliable method, USG can be used in diagnosis of both lower and upper urinary tract infections. Adopting the accurate methods are useful for reducing the high treatment cost too. So, history, clinical signs, laboratory findings, and ultrasonographic imaging should be carefully evaluated for diagnosis. (Kose *et al*., 2018)

## CONCLUSION

A rare occurrence of acute cystitis in a Beetal goat is documented and reported. The condition could be diagnosed by abdominal ultrasonography and microbial culture of urine and managed successfully by enrofloxacin injection and supportives.

## ACKNOWLEDGEMENT

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## CONFLICT OF INTEREST

The authors declare that they have no conflict of interest.

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