

## Cystitis in an Adult Buffalo—A Case Report

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### Abstract

An adult buffalo with history of fever, anorexia, and frequent urination with turbid urine for two days was presented to the hospital. Microscopic examination of urinary sediment revealed presence of pus cells, erythrocytes, bacteria and desquamated epithelial cells. Haematology revealed leukocytosis with neutrophilia. Concentrations of blood urea nitrogen and serum creatinine were higher than normal values. Ultrasonography examination revealed presence of mixed echogenic contents with hyperechogenic bladder wall. Based on the clinical, laboratory examination and ultrasonography examination present case was diagnosed as cystitis. Buffalo was successfully treated with inj. amoxicillin and cloxacillin along with symptomatic therapy for five days.

**Keywords:** Buffaloes, Cystitis, Urine, Ultrasonography

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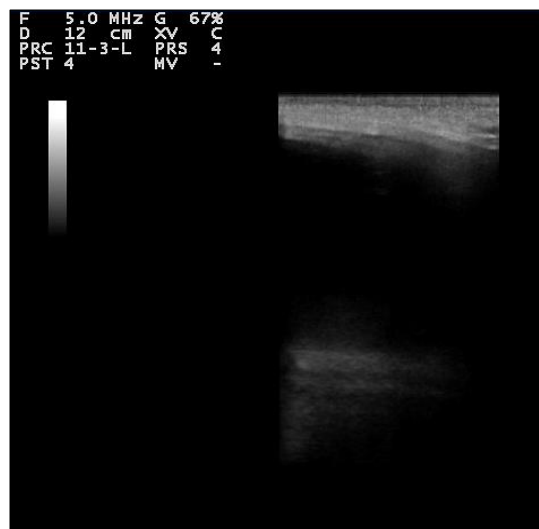
### INTRODUCTION

Bovine cystitis is an inflammation of the urinary bladder of cattle. The condition is sporadic and worldwide in distribution [1]. The organisms colonize the mucosal lining of the bladder and ureters usually due to stress caused by the parturition, peak lactation and high protein diet [2]. Buffaloes exhibit discomfort by frequent attempts to urination, anorexia, loss of production, colic with restlessness, tail switching, polyuria and pyuria. Present communication reports about the ultrasonographic confirmation of the cystitis in a buffalo and its successful management.

### CASE HISTORY AND OBSERVATION

An adult buffalo was presented to the Teaching Veterinary Clinical Complex, College of Veterinary Science, Proddatur with the history of frequent urination and turbid urine for two days. Further history revealed that animal was calved six months back and had two unsuccessful inseminations. Initially passing of cloudy urine and followed by light colour urine was observed during urination. Buffalo had normal feeding and defecation except mild straining while urination. Clinical parameters including temperature (101°F), respiration (18 per minute), heart rate (72 bpm) and ruminal motility (1/3 min) were

within the normal range. Rectal examination revealed non-gravid uterus and passing of cloudy urine while examination. Trans-rectal ultrasonographic examination revealed presence of mixed echogenic contents with hyper echogenic bladder wall (Figure 1). Whole blood, serum and urine were collected for laboratory examination.



**Fig. 1:** Ultrasonography of Bladder—Double Layered Appearance of Bladder Wall.

There was no traces of parasites in wet blood films and Giemsa stained blood smears. Uristic examination of urine revealed the presence of protein, leucocytes, ketone bodies and alkaline pH (8.5) (Figure 2). Haematology

revealed, normal haemoglobin (9.8 g/dL), total erythrocyte count ( $4.67 \times 10^6/\mu\text{L}$ ), packed cell volume (34%), higher total leucocyte count ( $14400/\mu\text{L}$ ) with neutrophilia ( $4200/\mu\text{L}$ ). High levels of blood urea nitrogen (52 mg/dL) and creatinine (1.85 mg/dL) were noticed [3]. Microscopic examination of stained urinary sediment revealed presence of pus cells, erythrocytes, desquamated epithelial cells and bacteria.



**Fig. 2:** Dipstick Uristic Examination of the Urine.

### TREATMENT AND DISCUSSION

Based on the clinical and laboratory findings the case was diagnosed as a case of cystitis. Buffalo was treated with Intamox inj (2.5 g I.M. BID, for 5 days), DNS (1000 ml, I.V. for 3 days), Maxxitol inj (15 ml, I.M. for 3 days) and chlorpheniramine maleate inj (15 ml, I.M. for 2 days). Urinary acidifier was advised (ammonium chloride @ 50 mg/kg body weight, PO, BID) to maintain the acidic environment in the urinary bladder. After three days of therapy, animal was active and urination was normal and no straining was noticed. Urine was free from abnormal colour by the fourth day and after seven days of therapy urine was free from microscopic abnormalities.

Inflammation of bladder occurs mainly due to ascending or descending infection. In cystitis the urine becomes turbid due to presence of desquamated epithelial cells of the bladder in urine where as in other cases haemorrhages in the bladder may lead to haemorrhagic cystitis. In the present case turbid urine was observed due to presence of high epithelial cells in the urine [4]. In the present case study, diagnosis

was made based on the urine colour, per rectal examination, ultrasonography and microscopic examination of the urine sediment [5]. In the present case course of antibiotic was advised for the period of 5 days to prevent the recurrence [4]. Recurrence of infection is usually due to failure to eliminate foci of infection in the accessory gland and in the bladder wall. In the present case urinary acidifier was advised to alter pH of urinary bladder along with daily intra venous administration of fluids.

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