**Abstract**

A 3-year old Jamunapari goat was referred to SAQ Teaching Veterinary Hospital, Chittagong Veterinary and Animal Sciences University with the history of swollen udder, anorexia, reduced milk yield and general illness. Clinical examination of the goat revealed fever, accelerated pulse and slightly swollen udder. The color of milk was normal and the pH of milk was measured 7.4. California Mastitis Test of the milk was scored3+. Milk samples from each of the teats were collected and investigated for isolation and identification of responsible bacterial pathogen.Antimicrobials susceptibility test was carried out to determine the sensitivity pattern of the isolate against 12 different antibiotics. In addition, blood sample was collected from the jugular vein and was analyzed for hematological and biochemical parameters.Isolation and identification of the causative agent revealed *Staphylococcusaureus*. The results of antimicrobials susceptibility test showed that the isolate was sensitive to enrofloxacin, gentamicin, ciprofloxacin, chloramphenicol and erythromycin but displayed resistance to ampicillin, amoxicillin, tetracycline, kanamycin and streptomycin. The results of haematology exhibited an increase in neutrophil count while other parameters were in normal reference ranges. However, changes observed in the total red blood cell count, packed cell volume and hemoglobin concentrations as evidenced by blood plasma biochemistry.The findings indicate that mastitis in goat results in fluctuations in hematological and blood plasma biochemical parameters.

**Key word:** Ager, Blood, California Mastitis test, Goat, pH and Mastitis.