STUDY ON PREVALENCE, RISK FACTORS AND TREATMENT ASSESMENT OF RUMINAL ACIDOSIS IN CATTLE & GOAT

ABSTRACT

A comprehensive study on prevalence, risk factors and treatment assessment of ruminal acidosis of cattle registered in Upazila Veterinary Hospital at Kaliganj in Gazipur district and goat registered in SAQ Teaching Veterinary Hospital, CVASU, in Bangladesh was conducted in July-December, 2012. Total 16 clinical cases were considered under this study. Diagnosis of the cases were performed by taking detail relevant history, observing clinical signs, detail clinical examination including color, odor and consistency of rumen fluid and rumen microflora movements. Confirmations of the cases were performed by measuring the rumen fluid and blood pH. Calcium level of blood was measured by biochemical analyzer to determine hypocalcaemia. The study revealed that the overall prevalence of ruminal acidosis in ruminants were 2.6%. There was found no statistically significant different (P> 0.05) of prevalence of ruminal acidosis between cattle (4.04%) and goats (1.9%). Among the clinical cases, sex wise prevalence of ruminal acidosis was 50% in both male and female cattle and 62.5% and 37.5% in male and female goat. In cattle, based on breed prevalence of ruminal acidosis were 62.5% in ND cattle and 37.5% in HF cross breed cattle. In case of goat, breed prevalence were 62.5% in BBG and 37.5% in Jamunapari goat. In age group of cattle, prevalence were 37.5% in < 2 year’s cattle and 62.5% in > 2 year’s cattle. In goat, the age group prevalence were 75% in <1½ year’s goat and 25% in > 1$½$years goat. Most of the cases (50% in cattle and 62.5% in goat) the predisposing factor of ruminal acidosis were feeding of cooked rice in both species. Other easily digestible carbohydrates like- jackfruit residue, potato, bread, rice gruel are also found as predisposing factors. The mean temperature, rumen motility per 5 minutes, rumen fluid pH and serum pH of the cattle affected with ruminal acidosis were 101.06$\pm $1.24$℉$, 3.25$\pm $2.60, 5.01$\pm $0.63 and 7.16$\pm $0.23, respectively. These parameters in case of goat were 103.01±1.14$℉$, $4\pm 2.2$ per 5 minutes, 4.9$\pm $0.63 and 7.16$\pm $0.20, respectively. In addition, the serum calcium level of goats were 9.09$\pm $1.26 mg/dl. A positive correlation was observed between duration of illness of different cases and ruminal fluid pH and a negative correlation between duration of illness of different cases and blood pH were noticed. The most effective treatment and quicker improvement of the cases was observed that were treated with ruminal (Orally) and systemic alkalizer (I/V) along with fluid therapy in both species. This study recommends the farmer to abstain from feeding of large amount of easily digestible carbohydrates to ruminant at a time.

**Key words:** Acidosis, Prevalence, Risk factors, Rumen fluid pH, Blood pH, Cattle, Goat