Table 2: Rectal exploration findings in 15 animals with late pregnancy indigestion.

Characteristic	Finding	Number of animals
Faecal quantity in rectum	Reduced	3
	Scanty	10
	Absent	2
Faecal consistency	Normal	6
	Faeces absent	2
	Pelleted	1
	Hard	2
	Loose	3
	Pasty	1
Presence of mucous	Absent	14
	Mucous with faeces	1
Hindered hand movements	No	2
	Yes	13
Rectal mucosa	Normal	12
	Sticky	3
Rumen size	Normal	7
	Mild to moderate distension	6
	Severe distension	2
Rumen consistency	Mushy	7
	Doughy	7
	Hard	1
Intestines	Normal	14
	Mild to moderate distension	1

Conjunctival mucous membrane was congested in seven and pale in two animals. Mean heart rate (84.13 ± 4.5/minute) and respiration rate (37.33 ± 2.9/minute) were increased and all animals were mildly to moderately dehydrated. Rumen was atonic in three, hypomotile in eight, and hypermotile in two cases, and rumen consistency was mushy or doughy. Five animals had moderate distension of left paralumbar fossa, two animals had papple shaped abdomen, and two animals had bilateral abdominal distension. Perrectal examination revealed viable fetuses in all the cases. Radiography of reticular area revealed no abnormality.

The significant variations of hematological and biochemical parameters from respective control values are presented in Table 3. There were no significant differences from control values with respect to hemoglobin, packed cell volume (PCV), and total white blood cell (WBC) count. Neutrophil ($P \leq 0.01$) and lymphocyte ($P \leq 0.05$) counts were significantly higher and lower than the control value, respectively. Hematological analysis revealed neutrophilia in 11 and neutrophilic leukocytosis in three animals. The toxic changes in neutrophils were mild to moderate in 6 cases and severe in one case. Left shift was mild to moderate in five cases and marked in two cases. Total bilirubin ($P \leq 0.01$), aspartate aminotransferase (AST) ($P \leq 0.01$), total protein ($P \leq 0.05$), globulin ($P \leq 0.01$), blood urea nitrogen (BUN) ($P \leq 0.05$), glucose ($P \leq 0.01$), and lactate ($P \leq 0.01$) were significantly higher than control values while chloride ($P \leq 0.01$) and calcium ($P \leq 0.01$) were significantly lower than the control values. Although alkaline phosphatase (ALP) and gamma glutamyltransferase (GGT) were higher than the reference values, they did not differ significantly from control value. Potassium and phosphorus were lower than reference values but did not differ significantly from control values. In all the animals, rumen pH was within normal reference range of 6.2–7.2, while rumen chloride concentration was higher than the standard reference range (<30 mEq/L).

Out of 12 animals, managed medically, two died within 3 days. Out of these 12, the 10 survived animals gave birth to the healthy calves without any calf mortality. In majority of the animals, there was no effect on milk production in the current and subsequent lactation. Recurrence of the disease in subsequent pregnancy was recorded in one animal only. As per the owner of this animal, the milk yield in the subsequent lactation was less than the expected. Three animals (in which parturition was induced, induced after rumenotomy in one animal) conceived and parturated without any complication. So, in total, thirteen animals made an uneventful recovery after a period of 5–27 days.

4. Discussion

To the authors best knowledge this is the first study to describe detailed hematobiochemical findings in late pregnancy indigestion of cattle and buffaloes. The indigestion in advanced pregnancy may be attributed to compression of intestines by the gravid uterus resulting into functional