

STUDY ON HAEMATOLOGICAL PARAMETERS IN BERARI GOAT

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Goat rearing is one of the most important sources of income for majority of rural families. Berari is recently recognized as 23rd goat breed of India with accession number INDIA_GOAT_1100_BERARI_0623 (Kuralkar *et al.*, 2013). The Berari goat, a breed of central India (Vidarbha region of Maharashtra), is low yielding prolific meat breed thriving well in tropical wet and dry climate. The significance of determining haematological and biochemical indices of domestic animals has been well documented (Babeker and Elmansoury, 2013). The hematological and biochemical values are very important for evaluation of normal physiological status of animal. No information are available in literature on pertinent values of blood parameters in Berari goats . Considering these facts, the present study was undertaken to determine the normal hematological and biochemical values of Berari goats .

MATERIALS AND METHODS

For this study total 206 clinically healthy Berari goats of both the sexes (42 male and 164 female) from different areas of breeding tract were selected randomly. The blood samples collected were subjected to various haematological tests. Haemoglobin (Hb), packed cell volume (PCV), Total erythrocyte count (TEC), total leukocyte count (TLC), differential leukocyte count (DLC) was estimated. Blood indices: Mean corpuscular volume (MCV), mean corpuscular haemoglobin (MCH) and mean corpuscular haemoglobin concentration (MCHC) was estimated. The data generated was analyzed statistically (Snedecor and Cochran, 1989).

RESULTS AND DISCUSSION

The mean values of haematological parameters in Berari goats in relation to sex are presented in Table 1.

The values of haemoglobin, TEC and TLC were higher in male than in females, whereas the mean values of haemoglobin and TEC was significantly higher in male goats than in female goats.

The overall mean value of PCV, TEC, and TLC was within the range of reference value (Feldman, et al., 2000). There was no significant effect of sex on MCH and MCV whereas MCHC was significantly higher in male than female goats. The overall values for MCH, MCV and MCHC obtained in this study were within the range of reference value (Feldman, et al., 2000). The lymphocytes % in male Berari goat was significantly higher than female goat, whereas sex did not have significant influence on other leucocytes indices.

Thus the present study indicated the influence of sex on some haematological parameters and the study revealed that the physiological ranges of hematological profile of Berari goat were different from that of other goat breed. There were resemblances in some of the parameters to that of other goat breed. However, all the values were within the normal range. Hence haematological values from this study could be used as a reference values for Berari goats and would also help in proper monitoring of herd health and appropriate diagnosis of diseases.

Table 1. Hematological values in male and female Berari goats

Parameters	Male	Female	Pooled
Hb (g/dl)	7.14 ±0.16 ^b	6.68 ±0.10 ^a	6.78±0.09
PCV (%)	21.18±1.17	21.54±0.42	21.46±0.41
TEC (10 ⁶ /µl)	9.37±0.27	8.83±0.14	8.94±0.13
MCH (Pg)	8.05±0.21	7.89±0.17	7.92±0.14
MCV (fg)	23.78±1.32	25.38±0.64	25.06±0.57
MCHC (g/dl)	38.32 ±2.39 ^b	32.67 ±0.69 ^a	33.82±0.75
TLC (10 ³ /µl)	13.66 ±0.90 ^b	11.81 ±0.36 ^a	12.19±0.34
Lymphocytes (%)	63.79 ±7.25 ^b	60.04 ±0.88 ^a	60.80±0.75
Neutrophils (%)	30.43±0.90	31.97±0.94	31.42±0.77
Monocytes (%)	3.95±0.34	3.86±0.16	3.88±0.14
Eosionphils (%)	4.26±0.37	4.43±0.24	4.40±0.20
N	42	164	206

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