

Haematological Studies of Gaolao Calves

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Abstract

The hematological study in fifteen healthy Gaolao calves ranging from birth to 12 months of age indicate the mean \pm S.E. value of TEC (11.00 ± 0.20 million/cu.mm), Hb (14.27 ± 0.43 gm%), PCV ($35.00 \pm 0.79\%$), MCV (31.70 ± 0.92 cu. μ), MCH (13.04 ± 0.84 μ . μ gm), MCHC ($41.16 \pm 1.76\%$), TLC (07.49 ± 0.39 thousand/cu.mm), Lymphocytes ($71.87 \pm 1.45\%$), Neutrophil ($23.27 \pm 1.27\%$), Monocyte ($1.3 \pm 0.25\%$), Basophil ($0.27 \pm 0.12\%$) and Esonophil ($3.4 \pm 0.49\%$).

Keywords: Blood, Haematological constituents, Gaolao

Introduction

The hemogram indicates the physiological, pathological and nutritional status of farm animal. The hematological values of many indigenous breeds of cattle have been reported by many workers (Mullick and Pal, 1942; Pal *et al.*, 1945; Sagar, 1962; Pandey and Pal, 1971; Talvekar *et al.*, 1980). However, the information of Gaolao calves is not available. The present paper describes the results of hematological studies in Gaolao calves.

Materials and Methods

The study was carried out on fifteen Gaolao calves ranging from birth to 12 months of age of 'Government Cattle Breeding Farm, Heticundi, Dist. Wardha'. All the animals under study were apparently healthy. The blood samples were collected from jugular vein and placed in sterile test tubes containing EDTA (1 mg/ml of blood) and were analyzed immediately for TEC, TLC, Hb, PCV, MCV, MCH, MCHC and DLC using standard hematological technique as described by Wintrobe (1960) and Schalm *et al.* (1975).

Results and Discussion

The different mean values of hematological parameters in Gaolao calves (below 12 months of age) are presented in the Table. Mullick and Pal (1942) recorded Hb (14.6 gm%) and total erythrocyte (11.6×10^6 cmm) in Hariyana calves. Patel *et al.* (1965) in Gir calves and Bhalla *et al.* (1964) have also reported similar findings.

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References

- Bhalla, R. C., Senger, D. P. S. and Sub, S. C. (1964). *Indian Vet. J.*, **41** : 578.
- Kusner, H. F. (1942). *Animal Breeding Abstract*. **10** : 155.
- Mullick, N. D. and Kehar, N. D. (1952). *Indian J. Vet. Sci. and Ani. Husb.*, **22** : 61.
- Pal, A. K., Mamin, S. A. and Mullick, D. N. (1945). *Indian J. Vet. Sci. and Ani. Husb.*, **15** : 119.
- Pandey, J. N. and Pal, A. K. (1971). *Indian Vet. J.*, **48** : 901.
- Patel, B. M., Meman, G. N. and Shukla, P. C. (1965). *Indian Vet. J.*, **42** : 415.
- Sager, R. H. (1962). *Indian Vet. J.*, **39** : 157-161.
- Schalm, O. W., Jain, N. C. and Carroll, E. J. (1975). *Veterinary Hematology*. 3rd Lea and Febriger, Philadelphia.
- Talvekar, B. A., Kulkarni, B. A. and Raikar, R. K. (1980). *Indian Vet. J.*, **57** : 640.

Table-1. Mean (\pm S.E.) values of hematological attributes in Gaolao Calves (below 12 months of age)

Sr.	Parameters	Mean values	\pm S.E.
1.	TEC ($\times 10^6$ cmm)	11.00	0.20
2.	Hb (gm%)	14.27	0.43
3.	PCV (%)	35.00	0.79
4.	MCV (cu μ)	31.70	0.92
5.	MCH (μ μ gm)	13.04	0.84
6.	MCHC (%)	41.16	1.76
7.	TLC ($\times 10^3$ cmm)	07.49	0.39
8.	Lymphocytes (%)	71.87	1.45
9.	Neutrophil (%)	23.27	1.27
10.	Monocytes (%)	01.30	0.25
11.	Basophil (%)	00.27	0.12
12.	Easinophil (%)	03.40	0.49

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