GAU Res. J. 1985. 10 (2) : 81-82

Studies on Some Blood Values in Kankrej Cows During Gestation

K. S. Prajapati, K. S. Patel* and D. D. Heranjal

Department of Pathology, College of Veterinary Science and Animal Husbandry, GAU, Anand-388 001

Normal blood sugar and hematological values in Kankrej cows have been studied by Mithuji *et al.* (1966). The present work was undertaken to study the changes in the blood sugar and hematological values in Kankrej cows during different stages of gestation. Fifteen blood samples were collected every month of gestation from second to ninth month of pregnancy from the pregnant Kankrej cows kept at Livestock Research Station, Gujarat Agricultural University, Anand. Samples were collected in heparinized vials and were immediately processed for blood sugar estimation by Eyetone** reflectance colorimeter. Haemoglobin (Hb), total erythrocyte count (TEC), total leukocytic count (TLC), differential leukocytic count (DLC) and packed cell volume (PCV) (Microhematocrit method) were estimated according to Coles (1974). The mean of the values obtained are shown in the Table 1.

TABLE 1

Average values of blood glucose, Hb, TLC, TEC and PCV in Kankrej cows during different stages of gestation.

Stage of gestation in months	*Blood glucose m %*	*Hb g %*	*TLC per cmm*	*TEC per cmm x 10^6*	*PCV %*
2	44.8	10.32	9,960	7.66	36.1
3	45.4	10.91	10,293	7.41	38.3
4	48.7	10.92	9,003	7.63	40.3
5	49.3	11.24	10,193	8.15	41.0
6	47.8	10.83	9,330	7.89	40.0
7	45.9	11.39	10,197	7.55	39.5
8	49.9	11.97	9,880	7.92	39.5
9	52.0	10.97	8,780	7.88	38.3
General mean	47.97 ± 1.9814	10.94 ± 0.2548	9,705 ± 549.33	7.76 ± 0.2097	39.10 ± 1.0323
Effect of stage of gestation	N.S.	N.S.	N.S.	N.S.	Significant $P < 0.05$
C.D. at 0.05	5.6	0.71	1540	5.88	2.9
c.v.%	16.00	9.02	21.92	10.46	10.22

* Present Address: Dr. D. D. Heranjal, Professor, Department of Livestock Production College of Veterinary Science and Animal Husbandry, Anand-388 001.

** Miles India Ltd.

The average blood glucose level of cows was 47.97 ± 1.9814 m%. The analysis of variance indicated that stage of gestation has non-significant effect on blood glucose levels of the cows. However, there was a tendency of increase in blood glucose level with advancement in the stage of gestation. The mean blood glucose levels observed during present study are in close agreement with those of Rangaswami and Govindan Nayar (1941).

The average Hb of blood was 10.94 ± 0.2548 g %. The variation in Hb content at different stages of gestation was non-significant. Mithuji *et al.* (1966) reported 11.91 ± 0.345 g % Hb in Kankrej cows.

The average total leukocytic count was 9,705 ± 549.33 /cmm with 21.92% coefficient of variance (cv). There was non-significant effect of stage of gestation. Higher cv % indicates the need for still larger number of observations for definite conclusion. However, there was a decline in the TLC during late pregnancy. The average leukocytic count observed during present study is, however, lower than 12630 ± 600 cmm, reported by Mithuji *et al.* (1966) in Kankrej cows.

The average erythrocyte count observed during present study was 7.76 ± 0.2097 million/cmm. There was non-significant effect of stage of gestation in the cows. Mithuji *et al.* (1966) reported 6.14 ± 0.23 million/cmm TEC in Kankrej cows.

The average packed cell volume observed was 39.1 ± 1.0323%. There was significant ($P<0.05$) effect of stage of gestation of the cows. In the second month of gestation, the cows had 36.1 % PCV which started rising from the third month and reached a peak value in the fifth month of gestation. Thereafter there was slight decrease in PCV %. PCV values in Kankrej animals are not reported. Khajuria and Razdan (1966) reported 33.0 ± 3.0% and 34.0 ± 3.0% PCV respectively in humid and winter seasons in Sahiwal cows which is little low as compared with the average values obtained in Kankrej cows during present study.

(*Received on 4th Oct, 1983*)

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