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**ABSTRACT**

The study was conducted to determine the hematobiochemical changes in sub-clinical mastitis and paramphistomiasis affected in high yielding varieties dairy cows. The study was conducted during the period from November, 2013 to January, 2014 in Chittagong district. A total of 21 Blood, 42 Milk and 42 fecal samples were collected from Nahar, Rubel, Friends, Wahid, A.S. dairy farms in Chittagong district for the study. The positive sub-clinical mastitis was identified by California Mastitis Test (CMT) and the paramphistomiasis were detected by direct smear from the fecal sample of dairy cows. Overall prevalence of paramphistomiasis was found 42.85% where 18 samples were positive from 42 fecal samples. Out of 42 milk samples 13 samples were positive whereas the prevalence of sub clinical mastitis was found almost 30.95% from 5 dairy farms in Chittagong district. Randomly 21 blood samples were collected from mastitis affected and non affected cows were analyzed for biochemical and hematological parameters. The result suggested that Calcium and Phosphorus were significant (p<0.05) and Mg was insignificant (p>0.05). Where the mean value of Calcium, Phosphorus and Magnesium in mastitis affected cows (12.46±4.00, 5.78±0.98 and 3.37±1.429) and in normal cows was (11.54±1.87, 4.98±0.53 and 2.28±1.150) respectively. The others estimated result were insignificant and the mean value in relation to Mastitis of infected cows ESR (1±0.654), PCV (27.42±5.223), RBC (6.85±1.305), WBC (9.1414±1.741), Hb (8.30±0.4864), Lymphocyte (72±4.727), Neutrophil (15.42±3.4086), Eosinophil (7.71±3.302), Monocyte (4.487±3.387) and Basophil (0.4286±o.534).The mean value of normal cows were ESR (1.21±0.425), PCV (28.35±5.32), RBC (7.089±1.332), WBC (9.450±1.77), Hb (8.92±0.687) ,Lymphocyte (70.50±8.234), Neutrophil (14.28±6.47),

Eosinophil (7.571±2.79), Monocyte (3.928±4.445) and Basophil (0.2143±0.425) respectively. Changes of hematological constituents are important indicators of the physiological or pathological state of the animal.

**Key words**: Hematobiochemical, sub-clinical Mastitis, California mastitis test.