**Haematological Variations in *Brucella abortus* Antibody Positive Cross-bred Cattle at Chittagong, Bangladesh**

**Abstract**

A hematological study was carried out to determine the considerable variations in blood parameters for brucellosis seropositivity in commercial dairy cattle in the Chittagong region of Bangladesh from February to July 2011. The study population comprised of 250 commercial cross-breed dairy cattle, randomly selected from 7 commercial farms. Individual and herd-level data were collected using structured questionnaire. Milk Ring Test (MRT) was done as a screening test. The MRT positive 50 cows were subjected to blood collection for hematological and serological tests. After separation of sera, two serological tests specifically indirect Enzyme Linked Immuno-Sorbent Assay (ELISA) and Rose Bengal Plate Test (RBPT) was done for confirmation. Among the 50 sera 21 was found positive to *Brucella* antigen. Hematological tests like hemoglobin (Hb), packed cell volume (PCV), erythrocyte sedimentation rate (ESR)), red (TEC) and white (TLC) blood cell count, MCV, MCH and MCHC were determined to observe whether any significant variation between the brucellosis positive and negative group was present or not. The results revealed that no significant variations were found among the parameters (p<0.05). However, slightly increased values of TLC, monocytes, eosinophil, MCV and MCH were recorded in the positive group. In addition, a little decline in the values of TEC, and neutrophil were found in the same group. The values of Hb, PCV, ESR, lymphocytes, basophils and MCHC were remained unchanged. The results showed that *Brucella* organisms are not responsible for a significant change in the hematological values, underscoring the need for further studies including chemical, hormonal and molecular changes in the serum or tissue or cellular level.

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Key Notes: Brucellosis, Milk Ring Test, iELISA, Rose Bengal Plate Test, Hematological tests.