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The total count of RBC and peripheral blood film in hemolytic anemic patients with and without G-6PD enzyme deficiency**Razzak M¹, Begum N² and Hossain M D³**¹Dhaka National Medical College, Bangladesh²Bangabandhu Sheikh Mujib Medical University, Bangladesh³Sir Salimullah Medical College, Bangladesh

Background: Erythrocyte G-6PD enzyme deficiency is an important cause of hemolytic anemia with consequent decrease bilirubin and increase various types of abnormal cell- microcytic hypochromic cells, target cells, nucleated red cells, tear drop cells, macrocytic cells, schizocytes, Heinz body, erythrocyte fragmentation, spherocytes and polychromasia.

Objective: To assess the RBC count and peripheral blood film in erythrocyte G-6PD enzyme deficient with hemolytic anemia in order to find their status.

Method: The cross sectional study was carried out in the Department of Physiology, BSMMU, Dhaka from July 2008 to 2009 to observe the RBC count and peripheral blood film in patient with hemolytic anemia. For this, total number of 50 hemolytic anemic patients (Groups-B) with age ranged from 5 to 30 years of both sexes was studied. Among them, 25 were without G-6PD deficient hemolytic anemia (group-B1) and 25 were hemolytic anemia with G-6PD deficiency (group-B2). Age and sex matched 30 apparently healthy subjects with normal blood G-6PD were included to observe baseline data (Group-A) and also for comparison. The subject was selected from out-patient Department of Hematology, Bangabandhu Sheikh Mujib Medical University, Dhaka. Blood erythrocyte G-6PD enzyme level and total RBC count were measured by standard laboratory techniques. Analysis of data was done by unpaired student's t-test.

Result: The total RBC count was significantly lower Group B2 vs. Group A and also Group B1 which were statically significant. Various types of abnormal cell were found Group B1 and also Group B2.

Conclusion: From this study, it may be concluded that, increased hemolysis of RBC with low RBC count and various types of abnormal cell were found in G-6PD deficient hemolytic anemic patients which might be membrane defect.

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