INCIDENCE OF MALARIA IN RELATION TO SEROGENETIC FACTORS IN POPULATION OF PURNIA DISTRICT (BIHAR)

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ABSTRACT : Incidence of malaria in relation to serogenetic factors (like ABO blood groups, Rh factor, haemoglobin concentration, Glucose 6 phosphate dehydrogenase deficiency and sickle cell anaemia was studied in the population of Purnia district of Bihar. The present study reveals a significant association of blood group ‘B’ to severe malaria. The association is valid across all grades of severity. Blood group ‘O’ confers protection to severe malaria and highlights susceptibility of group ‘A and ‘AB’ to severe malarial infection. The average hemoglobin in infected individuals found to be 8.92gm/100ml of blood. However, in five severe malaria patients hemoglobin concentration was 4.76gm/100ml of blood. The difference in mean haemoglobin concentration between the severe malaria and uncomplicated malaria or healthy control cases may be due to existence of increased destruction of red blood cells or higher rosetting in severe malaria patients. No case of G6PD deficiency and sickle cell trait was found in the studied population. Though, once upon a time malaria was prevalent in the area. Thus, the study reveals that there is a decrease tendency of sickle cell anemia and G-6-PD deficiency in the studied area.

Key words : Serogenetic factors, selective genetic pressure, rosetting, malaria, Purnia