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ASSOCIATIONS BETWEEN ABO BLOOD GROUP, SECRETOR STATUS AND MALARIA INFECTION IN OSOGBO, SOUTHWESTERN NIGERIA

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ABSTRACT

This study examined 158 malaria and 182 control subjects in order to determine the associations between ABO blood group, secretor status and malaria infection. From each participant, 5 ml of venous blood was withdrawn for malaria parasite and ABO blood grouping tests and 2 ml of saliva was collected for determination of secretor status. The results showed that the distributions of ABO blood groups among malaria subjects (O 47.5%; A 24.7%; B 21.5% and AB 6.3%) and controls (O 50.6%; A 23.6%; B 20.3% and 5.5%) were not significantly different (χ^2 = 0.36, df = 3, p = 0.945). Malaria among secretors (43.5%) was significantly less than among non-secretors (56.4%) (χ^2 = 4.02, df = 1, p = 0.045). Secretors varied significantly among ABO blood groups (χ^2 = 16.10, df = 3, p = 0.001). Group O secretors (86.2%) were significantly more than non-group O secretors (68.2%) (χ^2=15.61, df = 3, p<0.0001) and group O secretors who had malaria (34.7%) were significantly less than non-group O secretors (54.2%) (χ^2 = 10.05, df = 1, p = 0.002). Malaria among this study population was associated with non-secretion of ABH substances but not ABO blood group and least associated with Group O secretors.

KEYWORDS: ABO Blood Group, Associations, Malaria Infection, Secretor Status