ABO BLOOD GROUP AND SECRETOR STATUS IN HIV INFECTION IN OSOGBO, SOUTHWESTERN NIGERIA

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ABSTRACT

The present study was carried out to determine whether there is any association between ABO blood group, secretion of ABO antigens and HIV-1 infection. A total of 240 individuals of age ≥16 years consisting of 117 HIV-1 positive individuals and 123 HIV negative individuals (controls) participated in this study. A sample of 5 mL of blood was withdrawn from each participant for HIV and ABO blood grouping tests. Antibodies to HIV were carried out using determine rapid HIV-1/HIV-2 test kit and Enzyme linked immunosorbent assay (ELISA) and then confirmed with Western blot (WB). Secretors and non-secretors phenotypes were determined by haemagglutination inhibition technique using saliva. Of the 117 HIV-1 individuals, 101(88.9%) were secretors and 13(11.1%) were non-secretors while 92 (74.8%) and 31(25.2%) of the 123 HIV negative subjects were secretors and non-secretors respectively. Secretors were significantly more associated with HIV infection than non-secretors (χ^2 = 7.953, df = 1, p = 0.005). ABO blood group was not significantly associated with HIV infection (χ^2 = 1.66, df = 2, p = 0.558). There was a significant association between group O and secretor in controls (χ^2 = 5.964, df= 1, p = 0.015) but not in HIV infection (χ^2 = 0.004, df = 1, p = 0.949). These findings suggest that while there is no association between ABO blood groups and HIV infection, secretion of ABH antigens is associated with HIV infection.

Keywords: ABO blood group, ABH antigens, Secretors, Non-secretors, HIV infection.