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Abstract

Activities of some liver enzymes in serum of P. falciparum malarial

infected humans receiving artemisinin and non-artemisinin-based combination therapy

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The exoerythrocytic form of the malarial parasite invades the liver and so, caused the activities of liver enzymes in serum to increase, an evidence of liver dysfunction and compromise in membrane integrity. The influence of anti malarial drugs also metabolized in the liver has remained scarce in our environment. In this present study, the effect of artemisinin and non-artemisinin-based combination therapy (ACT and non–ACT) on serum liver enzymes (AST, ALT, and ALP) were assessed. One hundred and twenty five (125) subjects (35 infected with P. falciaprum malaria and receiving ACT, 22 infected with P. falciparum and are yet to receive treatment, and 38 individuals in apparent good health without malarial infection) between the ages of 20 – 49years were selected from some clinics and hospitals in Abraka, Delta State, Nigeria. Sera samples were obtained from the collected subjects' whole blood and prepared for the assay of liver enzymes: AST, ALT, and ALP, using standard recommended procedures. Results obtained show that malarial combination therapy whether ACT or non-ACT based, further increased the activities of AST, ALT, and ALP in serum of treated patients when compared with values obtained from the infected patients yet to commence treatment. The trend observed presented no significant gender bias, and the type of chemotherapy (ACT or non-ACT) did not significantly alter the pattern of findings, but advancing age progressively increased the activities of liver enzymes among the two groups being treated (ACT and non-ACT). The pattern of data following completion of drug dosage and total metabolism should be studied to complement this current finding and provide the experimental guide for proper health care.

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