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### **Effect of alcohol consumption on platelet, prothrombin time and activated partial thromboplastin time of alcoholics in Birnin Kebbi, Kebbistate, Nigeria**

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Alcoholism is a global public health problem with significant socioeconomic implications. The aim of this study was to investigate the effect of alcoholism on some haematological and haemostatic parameters of consecutively recruited alcoholics in Birnin Kebbi, Kebbi State, North Western Nigeria. This prospective case-control study included one hundred adults alcoholics [ $\geq 18$  years), aged range (18-60), mean age ( $38.46 \pm 13.26$ ) and 68 males (68%) and 32 females (32%)]. Fifty gender and age matched non-alcoholics were monitored as controls. Ethical approval was obtained from the research and ethics committee in the Faculty of Medical Laboratory Science of the Usmanu Danfodiyo University Sokoto, North Western Nigeria. Written informed consent was obtained from all study subjects after counseling. Participants for this study were divided into 3 groups; 50 heavy alcoholics, 50 moderate alcoholics (subjects) and 50 age and gender-matched non-alcoholics (controls). Platelet count of non-alcoholics, moderate and heavy alcoholics was;  $260.7 \pm 48.17$ ,  $253.3 \pm 43.16$  and  $130.6 \pm 6.79$  respectively. Platelet count was significantly lower among heavy alcoholics compared to non-alcoholics ( $p=0.0001$ ). Although marginally higher, there was no statistically significant difference in the platelet count of moderate alcoholics and non-alcoholics ( $p=0.10$ ). We observed a negative correlation between platelet count and duration of alcoholism ( $r=-0.62$ ). The mean prothrombin time (PT) and activated partial thromboplastin time (APTT) values of non-alcoholics, moderate alcoholics and heavy alcoholics was; ( $14.46 \pm 0.97$  and  $34.82 \pm 13.71$ ), ( $15.74 \pm 1.26$  and  $35.78 \pm 3.50$ ) and ( $19.46 \pm 0.93$  and  $43.42 \pm 5.13$ ) respectively. Prothrombin time and activated partial thromboplastin time values were significantly lower among heavy alcoholics compared to non-alcoholics ( $p=0.0001$ ). PT and APTT were marginally higher among moderate alcoholics compared to non-alcoholics but the difference however was not statistically significant ( $p=0.08$  and  $0.62$  respectively). We observed a positive correlation between duration of alcoholism and prolonged prothrombin time and activated partial thromboplastin time ( $r=0.46$  and  $0.55$  respectively). Our study has shown that alcoholism produces a significant adverse effect on some haematological and haemostatic parameters. Evidenced data generated from this study can facilitate the development of a policy on the effective management of haematological and haemostatic complications associated with alcoholism. There is need to enact laws that regulate the production, sales and consumption of various alcoholic beverages to prevent abuse and protect the health of citizens.

#### **Biography**

Erhabor Osaro is an Associate Professor of Haematology and Transfusion Medicine in Usmanu Danfodiyo University, Sokoto, Nigeria. He is a Chartered Scientist and Fellow of the Institute of Biomedical Science of London. He holds a Doctor of Philosophy degree in Immunohematology from the Rivers State University of Science and Technology Rivers State, Nigeria. His teaching experience spans both the African continent and Europe. He is a recipient of several awards including the famous British Blood Transfusion Society Young Scientist Award and the Margaret Kenwright Young Scientist Award. He is the author of 4 scientific books and 5 chapters of scientific books. He is a member of the editorial board as well as an article reviewer of several international scientific journals and a well published contributor with more than 100 published articles in the field of infectious diseases, occupational health, immunohaematology and transfusion medicine.

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