L-arginine and nitric oxide levels among hypertensive patient in Sokoto, North Western Nigeria

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Hypertension is a global public health problem that adversely affects the health status of individuals, families and communities. L-arginine and nitric oxide levels of a total of 90 consecutively recruited hypertensive subjects and 50 age-matched non-hypertensive controls were studied. Plasma from subjects and control participants were analyzed for L-arginine and nitric oxide. L-arginine and nitric oxide levels were significantly lower among the hypertensive subjects compared to those of the non-hypertensive controls (p=0.04 and 0.05) respectively. There was no statistically significant difference in the L-arginine and nitric oxide levels of the hypertensive subjects based on gender and age group (p=0.87 and 0.22) and (p=0.23 and 0.47) respectively. L-arginine level was significantly higher among married hypertensive subjects compared to single subjects (p=0.03). There was no statistically significant difference in the nitric oxide level of hypertensive subjects based on marital status (p=0.81). The difference in the L-arginine and nitric oxide level of hypertensive subjects based on ethnicity was not statistically significant (p=0.57 and 0.25) respectively. The mean nitric oxide level was significantly higher among hypertensive subjects with mildly raised blood pressure compared to those with high blood pressure (p=0.01). The findings in this study confirm that the level of L-arginine and nitric oxide is lower among hypertensive subjects compared to non-hypertensive controls. It may be necessary to routine prescribe nitric oxide generating L-arginine supplement to hypertensive patient. It may be necessary to carry out public enlightenment of hypertensive patients in the area on the need to maintain a balanced diet containing sufficient level of L-arginine.

Biography
Erhabor Osaro is currently a Professor of Hematology, Transfusion Medicine and Laboratory Total Quality Management. He is an Alumni of Rivers State University of Science and Technology, Nigeria, University of Greenwich in the United Kingdom and Francis Tuttle College of Technology in Oklahoma, USA. He is the author of 5 books and 5 book chapters. He has published more that 190 papers in the field of infectious diseases, hematology, blood transfusion science and total quality management. He is also a Member of the Editorial Board as well as an article Reviewer to several international scientific journals.

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