Blood pressure patterns in relation to age, weight and urinary electrolytes in three Kenyan communities.

Poulter, NR; Khaw, KT; Mugambi, M; Peart, WS; Rose, G; Sever, P

Date: 1985

Abstract:

The blood pressure patterns of three Kenyan communities have been studied: 861 members of the Luo tribe in a rural community, 281 members of the Kamba tribe in a rural community and 310 "urban" Luo living in Nairobi. The slope of linear regression of blood pressure with age was significantly different in each population: rural Luo had the smallest rise with age and urban Luo had the largest rise with age, while the Kamba tribe were in between. The differences could not be accounted for by weight. Urinary electrolyte data showed rural Luo had the lowest sodium ratios (sodium/creatinine, sodium/potassium) and the highest potassium/creatinine ratio: urban Luo had the highest sodium and lowest potassium ratios and rural Kamba had values in between. The differences in blood pressures between the two groups of the same tribe in different environments (rural and urban Luo) were far greater than those between different genetic groups (Kamba and Luo) underlining the importance of environmental factor(s) in the determination of arterial pressure. Furthermore, these data support the theory that the dietary intake of sodium and potassium are the major influential environmental factors affecting blood pressure.