

Patterns of homocysteine in Kenyans with type 2 diabetes without overt cardiovascular disease at Kenyatta National Hospital, Nairobi

Abstract:

Increased total homocysteine (tHcy) is an independent risk factor for cardiovascular disease. The measurement of tHcy in blood is therefore of potential great importance especially in patients with type 2 diabetes. **OBJECTIVE:** To determine the total homocysteine levels in ambulatory patients with type 2 diabetes. **DESIGN:** Cross-sectional, prospective study. **SETTING:** Outpatient diabetic clinic of the Kenyatta National Hospital. **SUBJECTS:** Ambulatory patients with Type 2 diabetes without overt cardiovascular, renal, liver or other chronic disease. **MAIN OUTCOME MEASURES:** Serum levels of tHcy, HbA1c, lipids and socio-demographic characteristics. **RESULTS:** A total of 115 patients, 48% males, with type 2 diabetes were included in the study. The mean (sd) age of the males was 56.85 (8.96) years and of the females was 55.68 (8.93) years. The mean (sd) total serum homocysteine for males of 12.97 (6.06) micromol/l was significantly higher than that of the females of 10.64 (4.41) micromol/l. The cholesterol, glycated haemoglobin, the body mass index and blood pressure of the study subjects did not show any statistically significant influence on their homocysteine levels. However, increasing age and duration of diabetes showed a significant linear relationship with rising level of total serum homocysteine. Some study participants reported smoking habit but unreliably. **CONCLUSION:** There was a significant proportion of the study patients with high levels of serum homocysteine, although most of them were of low to intermediate risk category. It may be prudent to assay homocysteine levels in patients with type 2 diabetes who are either older or have had diabetes for long duration for potential intervention.