Fasting Triglyceride Concentrations are Associated with Early Mortality Following Antiretroviral Therapy in Zambia.

BACKGROUND: In developing countries, 8 to 71% of patients initiating highly active antiretroviral therapy (HAART) die within the first year of treatment. Apart from baseline CD4 count, viral load, hemoglobin, BMI and stage of the disease, there may be other variables that contribute to AIDS-related mortality. We investigated the potential role of nutrition, lipids and insulin resistance-related phenotypes in predicting early mortality.

METHODS: We recruited 210 HAART-naïve HIV/AIDS patients in Lusaka, Zambia. Dietary intake, anthropometric measurements, fasting serum insulin, glucose, and lipid profiles were assessed at baseline. Mortality was assessed after 90 days of follow-up. We used logistic regression models to identify variables associated with mortality. RESULTS: The mean±SD for age, BMI and CD4 count at baseline were 34±7.4 y, 20±3 kg/m(2) and 138±52 cells/μL, respectively. Sixteen patients (7.6%) died during follow-up. Triglyceride concentrations were associated with increased mortality [odds ratio (OR) for 1 mmol/L increase in triglyceride concentration=2.51; 95% CI: 1.34-4.71]. This association remained significant (OR=3.24; 95% CI: 1.51-6.95) after adjusting for age, gender, smoking, alcohol use, total cholesterol, BMI, CD4 count and n3 fatty acid intake. Apart from higher n3 fat intake which was inversely associated with mortality (survivors: 1.81±0.99% total energy/day vs. non-survivors 1.28±0.66% energy/day, P=0.04), there were no other macronutrients associated with mortality.

CONCLUSION: Triglyceride concentrations at the time of initiating HAART are independently associated with increased risk for early mortality. If this association is confirmed in larger studies, assessment of triglycerides could become part of...
routine care of HIV patients initiating HAART in developing countries.