Hypertriglyceridemic Waist Does Not Identify Metabolic Triad in Men of African Descent

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Abstract

Hypertriglyceridemic waist (HTGW) identifies the Metabolic Triad, a set of three factors highly associated with cardiovascular disease (CVD). These three factors are: hyperinsulinemia, hyperapolipoprotein B and small dense LDL. As HTGW consists of only 2 criteria, waist circumference (WC)≥90 cm and triglyceride (TG)≥177 mg/dL, it is simple, inexpensive, and has potential for worldwide use as a screening test. However, HTGW has never been validated in Africans or African Americans. Of particular concern is that TG levels are lower in blacks than other races and ethnicities. Therefore, we determined in 146 black men (71 African, 75 African-American) (age: 35±8y, BMI: 28.5±5.4 kg/m2) the ability of HTGW to predict the Metabolic Triad. While the prevalence of Metabolic Triad was 42%, only 7% of black men had both HTGW and Metabolic Triad. Hence, HTGW failed to predict Metabolic Triad because less than 10% of black men met the TG threshold of ≥177 mg/dL. In fact, the mean TG level in black men with Metabolic Triad was only 97±44 mg/dL. Therefore, screening tests such as HTGW which require hypertriglyceridemia to detect CVD risk are unlikely to be effective in African or African-American men.