TACSM Abstract

P1 Height in Hispanics With and Without Family History of Type 2 Diabetes

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ABSTRACT

Coronary heart disease (CHD) is the world’s leading cause of death, with type 2 diabetes (T2D) increasing that risk ~3-fold. T2D incidence in Hispanics of the Rio Grande Valley (RGV) is >27% vs 9% noted nationwide. Further, having a family history of T2D (FH+) increases risk by ~40%. PURPOSE: To determine if specific aspects of macrovascular function may precede overt hypertension and T2D in FH+ people in the RGV. METHODS: Thirty-three healthy individuals, including 10 FH+ and 23 FH- (26 ± 7; 24 ± 5 yrs respectively), participated in this study. Hemodynamics and large artery function were assessed at rest. One-way ANOVA was used to determine group differences. Pearson correlation was used to determine relationships between significant variables. RESULTS: P1 Height, a measure of forward vascular pressure generated by ventricular contraction, was higher (p<0.05) in FH+ than FH- (p = 0.047: 26 ± 1 vs 31 ± 2 mmHg respectively). P1 Height was positively correlated with systolic blood pressure (r = 0.558), pulse pressure (r = 0.954), central pulse pressure (r = 0.759), %lean mass (r = 0.679), bone mineral density (r = 0.693), and brachial artery blood flow (r = 0.502), and inversely correlated with: triglycerides (r = 0.525) and %body fat percentage (r = -0.686). CONCLUSIONS: P1 Height is elevated in FH+ individuals and is related to some variables of positive health status, such as triglycerides and lower body fat. More studies are warranted to determine if P1 height is cardioprotective, or a pathophysiological precedent to hypertension.