

14th GLOBAL OBESITY MEETING

October 23-24, 2017 Dubai, UAE

Association between β -amino-isobutyric acid and cardiometabolic risk factors

Mirey Karavetian¹, Suzan Haidar², Nanne de Vries², Alessandro Laviano³ and Mohammad Rachid⁴

¹Zayed University, UAE

²Maastricht University, Netherlands

³Sapienza University of Rome, Italy

⁴Lebanese International University, Lebanon

Physical activity protects from the development of chronic diseases. Preclinical studies suggest that circulating levels of the myokine β -amino-isobutyric acid (BAIBA) may prevent obesity and improve cardiometabolic health. We aimed at assessing among healthy young individuals whether serum BAIBA is associated with physical activity, markers of cardiometabolic risk and whether gender differences exist. The design was cross-sectional, conducted on 80 university students. Anthropometry, blood pressure, lipid profile, blood glucose, C-reactive protein, cortisol and physical activity were measured and analyzed against serum BAIBA levels. Mean age of the sample was 19.3 ± 2.0 years. BAIBA levels were 1.57 ± 0.61 μ M. Males had significantly larger waist (86.0 ± 9.6 cm), systolic and diastolic blood pressure (124.9 ± 11.7 mmHg and 77.9 ± 9.9 mmHg, respectively), fasting blood glucose (84.6 ± 7.5 mg/dL), cortisol (594.8 ± 158.9 nmol/L) and physical activity levels than females. They also had significantly lower HDL (46.9 ± 7.3 mg/dL). BAIBA concentrations in males and females were not significantly different. No significant association was found between BAIBA concentrations and nutritional, metabolic and functional parameters, except for diastolic blood pressure (DBP) in males ($P=0.03$). BAIBA in males predicted DBP as disclosed by ROC curve analysis. The BAIBA value of 0.97 μ M was estimated as the best predictive value in distinguishing normotensive DBP in males whereby lower levels would distinguish higher diastolic blood pressure. In conclusions, among healthy, young individuals, serum BAIBA levels were not related to nutritional status, metabolic status and physical activity, but they were inversely related to DBP in males only.

Biography

Mirey Karavetian has earned her PhD in Health Promotion in Medical Sciences from Maastricht University, Netherlands and her Dietetics degree from American University of Beirut, Lebanon. She has extensive experience in nutrition management of the chronically and critically ill. Her research is focused on finding effective strategies to change dietary behavior in chronically ill patients. Her publications focus on dietary management of hemodialysis patients and finding the optimal dietitian-to-patient ratio needed in the hemodialysis unit in the Arab world for optimal clinical outcomes.

mirey.karavetian@zu.ac.ae

Notes: