

Endothelial function evaluation in patients with anorexia nervosa

Rubin S Cooper¹, Patcharapong Suntharos², Myriam E Almeida-Jones³, Howard S Seiden⁴, Martin Fisher⁵, Dorota Gruber⁵, Lisa M Rosen¹ and Andrew D Blaufox¹

¹North Shore-Long Island Jewish Health System, USA

²Cleveland Clinic Children's Hospital, USA

³University of California, USA

⁴Kravis Children's Hospital at Mount Sinai, USA

⁵Steven and Alexandra Cohen Children's Medical Center of New York, USA

Introduction: This study evaluated endothelial function in patients with anorexia nervosa (AN) using Endothelial Pulse Amplitude Testing (Endo-PAT) and correlated findings with the patients' history and biochemical data.

Method: Twenty-one patients age 13-21 years diagnosed with AN by the Division of Adolescent Medicine at Cohen Children's Medical Center of NY between 6/1/2012 and 5/31/2013 were studied along with 19 healthy controls similar in age and gender distribution. Digital pulse amplitude was examined using Endo-PAT. Raw data were automatically transferred into a reactive hyperemia index (RHI) and the natural log transformation of RHI (LnRHI). Subjects' and controls' electrocardiograms and biochemical markers were obtained.

Results: AN and controls had similar RHI ($P=0.75$) and LnRHI ($P=0.95$). AN had lower mean weight ($P<0.001$), height ($P=0.02$), BMI ($P<0.001$), resting HR ($P<0.001$), systolic ($P<0.001$) and diastolic BP ($P=0.01$). AN also had lower mean HR during EndoPAT testing ($P<0.001$), triiodothyronine (T3) ($P<0.001$), luteinizing hormone (LH) ($P=0.006$) and estradiol (E2) ($P=0.005$). Total cholesterol (Chol) ($P<0.001$) was higher in AN subjects. No correlation was observed between RHI and other parameters.

Conclusion: No significant differences in RHI or LnRHI found between the two groups. There were significantly higher Chol and lower HR, T3, LH and E2 levels in the AN group compared to controls. There were no correlations of these parameters to RHI.

Biography

Rubin S Cooper, MD Specialty is Pediatric Cardiology, Pediatrics. He is a Chief - CCMC Division of Pediatric Cardiology and Professor, Hofstra North Shore-LIJ School of Medicine, USA.

RCOOPER3@NSHS.edu