ADIPONECTIN PROTECTS AGAINST METABOLIC SYNDROME BY ITS MODULATION OF LIPID AND GLUCOSE METABOLISM,
Manoella Freitas Santos, Amanda Rodrigues Fabbrin, Vanessa Piccoli, Alessandra Locatelli Smith, Anize Delfino Von Frankenberg, Filipe Valvassori do Nascimento, Gabriele Cordenonzi Ghisleni, Fernando Gerchman

Body: Adiponectin, a hormone expressed in the adipose tissue, has insulin sensitizer properties. Objective: To examine the relationship of adiponectin with metabolic syndrome (MS) in patients of the Endocrine clinic of a university hospital. Methods: Patients (n=141; age 52.9±12.0 yrs, mean±SD, women 77.9%, MS rates 80.1%) were submitted to a 75g OGTT with estimation of insulin sensitivity by Matsuda index (ISI Matsuda), subclinical inflammation by US-CRP, liver damage by γGT. Lipid panel and plasma adiponectin (µg/mL) were measured. MS was defined by at least 3 of the following: hypertension, low HDL and/or high triglycerides levels, hyperglycemia and high waist circumference. Results: Adiponectin levels were lower in patients with MS than in those without MS (11.1 [7.8-13.9] vs 15.4 [9.9-22.7]; median [P25-P75], P= 0.007). Adiponectin decreased with increasing number of MS criteria (P=0.007). While comparing by each MS criteria, adiponectin were significantly lower only by the presence of the following: HDL (9.9 [7.1-13.4] vs 12.7 [10.0-20.2]; P<0.001), waist circumference (11.0 [7.9-14.4] vs 16.5 [12.3-26.2]; P=0.001) and triglycerides (10.7 [6.8-12.9] vs 12.1 [8.6-18.1]; P=0.026). Adiponectin was positively related with HDL (r=0.466, P<0.001) and inversely related with triglycerides (r=-0.225, P=0.008), fasting and 2-h plasma glucoses (r=-0.165, P=0.05 and r=-0.263, P=0.002). While adjusting for age, sex, CRP, γGT and ISI Matsuda, increasing adiponectin levels were associated with decreased risk for MS (OR 0.913, 95%CI 0.838-0.994, P=0.035). Conclusion: Protection against MS associated with increasing adiponectin levels is not affected by subclinical inflammation and liver damage, being possibly related to its positive modulation of lipid and glucose metabolism.