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Evaluation of adiponectin, soluble CD36 and high sensitivity C-reactive protein (hs-CRP) as potential biomarkers of metabolic syndrome patients of Bangladesh

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Abstract

Presence of several criteria for metabolic syndrome and lack of uniformity among them create confusion among the physicians during diagnosis. We estimated serum levels of adiponectin, soluble CD36 and hs-CRP in patients with metabolic syndrome and to see the variation of their levels in comparison to those of a group of healthy subjects. A total of 180 subjects were enrolled in this cross-sectional study. 120 of them met the criteria of 'consensus definition' for metabolic syndrome and 60 of them were healthy subjects without metabolic syndrome. Statistically significant difference was found in serum level of adiponectin (10.38 ± 5.09 vs 20.87 ± 8.23 ng/ml, p= <0.001), soluble CD36 (4.6 ± 2.93 vs 3.75 ± 1.68 ng/ml, p <0.001) and hs-CRP (3.26 ± 4.73 vs 3.23 ± 0.00 mg/dl, p= 0.002) between metabolic syndrome patients and healthy subjects. It also revealed significant difference in adiponectin (11.6 ± 4.32 vs 20.87 ± 8.32, p= 0.013) and soluble CD36 (4.20 ± 2.09 vs 3.75 ± 1.68, p= 0.006) level between diabetic and non-diabetic group of metabolic syndrome. Adiponectin level showed significant relation with most of the (4 out of 5) parameters of metabolic syndrome (waist circumference [WC] (r= -0.651, p <0.001), systolic blood pressure [SBP] (r= -0.385, p<0.001) and diastolic blood pressure [DBP] (r= -0.510, p<0.001), triglyceride (TG) (r= -0.253, p=0.024) and high density lipoprotein [HDL] (r= 0.256, p= 0.022)). Soluble CD36 showed positive significant relation with 3 parameters (WC (r= 0.345, p= 0.002), TG WC (r= 0.275, p= 0.014) and (DBP (r=0.361, p=0.001).

Biography:

Ashesh Kumar Chowdhury has completed his medical graduation at the age of 24 years from Dhaka Medical College under Dhaka University and postdoctoral studies in Immunology from same University School of Post Graduate Medical Faculty. He pursued PhD form International Centre of Genetic Engineering and Biotechnology (ICGEB). He is the professor and Head of Dept. of Immunology, BIRDEM General Hospital, a world renowned diabetes treatment and research organization.

Speaker Publications:

1. Significance of Interleukin-6, Interleukin-8, Procalcitonin and C-reactive protein as early diagnostic markers of sepsis.

2. International Journal of Scientific Research 2017; 6(6):604-607.June 2, 2017
Association of Myosin light chain 2 (MLC2) with troponin I and ejection fraction in patients with acute Coronary syndrome; International Journal of Scientific Research 2017; 6(4):598-600.April 2, 2017

3. Immunoglobulin G1 and G2 profile in children with Down syndrome; Ibrahim Medical College Journal of Medical Science 2017; 11(1):1-4.Jan 2017.

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