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Plasma adiponectin is an independent predictor of metabolic syndrome

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Objective: To evaluate the relationship between serum adiponectin level and metabolic syndrome and to identify factors influencing adiponectin level.

Methods: A cross-sectional study was performed for a period of 2 years, employing 90 subjects including 60 type 2 Diabetes Mellitus patients and 30 apparently normal individuals in Dept of Biochemistry RIMS in collaboration with Department of Medicine, RIMS Imphal. Metabolic syndrome was identified in both groups according to International Diabetes Federation Criteria (IDF).General characteristics,lipid parameters, HbA1c value were obtained for each subject.

Results: In this first study of adiponectin value in the Manipuri population, the mean ±SD value of adiponectin is 8.76 ±2.38 µg/ml in non metabolic group and is significantly decreased in metabolic syndrome individuals ,i.e 5.92 ±1.13 µg/ml (p=0.000). Serum adiponectin level was correlated negatively with waist circumference, triglyceride, and positively with HDL-cholesterol level. Both sexes with the lowest adiponectin quartile had a higher prevalence of Metabolic Syndrome and its components than that with the highest quartile. Females have higher level of adiponectin which was independently predicted by waist circumference. A cut off value of hypoadiponectinemia (<7.425 µg/ml is proposed to predict future occurrence of metabolic syndrome in this ethnic population. Adiponectin reduce the risk of having metabolic syndome (0.405 times less chance, p<0.001)

Conclusions: Hypoadiponectinemia is strongly associated with Metabolic Syndrome. Our results suggest that the level of adiponectin may act as predictor of metabolic syndrome.

Biography

Y Premchandra Singh has done MD in Biochemistry (RIMS imphal). He has done Fellowship in Diabetes management from CMC Vellore and also accredited certificate course in Endocrinology, Diabetes and metabolism from Dr MGR medical University Chennai. He is also a fellow of HIV Medicine from the prestigious School of Tropical Medicine Kolkata; a centre of Excellence in HIV Medicine .He has wide areas of research interest in the field of Endocrinology, Diabetes and HIV Medicine. He has completed the ICMR course on Endocrinological techniques (NIN Hyderabad), ICMR course on Medical Genetics and counselling (SGPGI Lucknow).He has been working in the field of obesity and diabetes and has published 5 national papers and 2 international research papers.

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