

## 4<sup>th</sup> International Conference and Exhibition on **Nutrition**

October 26-28, 2015 Chicago, Illinois, USA

### **Prevalence of the components of metabolic syndrome (Met-S) and its determinants in higher secondary schools in Dhaka districts**

**F Afnan, F Saleh, A Mowlah and L Ali**  
University of Dhaka, Bangladesh

**Aim:** Present study was conducted to determine the prevalence Met-S components and its' determinants in higher secondary schools.

**Methods:** Through a multistage sampling method 328 adolescents (age  $17.41 \pm 1.48$  years,  $M \pm SD$ ) were included from higher secondary schools. Met-S Component was diagnosed using IDF, modified ATPIII and WHO criteria.

**Results:**  $\uparrow$  TG (13.7%) found according to IDF, ATPIII and WHO followed by  $\downarrow$  HDL-C (70.1%) in IDF and ATPIII and 36.9% in WHO. Abdominal obesity (8.5%) was found in IDF and ATPIII,  $\uparrow$  FBG (5%) found in IDF and ATPIII though (0.6%) as per WHO. 7.3% subjects had the combination of  $\uparrow$  WC with  $\downarrow$  HDL-C and 11.3% had  $\uparrow$  TG with  $\downarrow$  HDL-C in IDF. According to IDF and ATPIII female increased the risk of HDL-C (OR 3.51; 95%) in WHO; current smoker (OR 0.40; 95%) and family history of hyper-lipidemia (OR 2.59; 95%) enhanced it too. Female gender also increased the risk of abdominal obesity (OR 3.49; 95%) and W: H ratio (OR 3.56; 95%) in IDF, ATPIII and WHO.

**Conclusion:** Among the components of Met-S  $\uparrow$  TG,  $\downarrow$  HDL-C are more prevalent. Prevalence of abdominal obesity is high in IDF and ATPIII. Female gender, current smoking habit and family history of hyper-lipidemia are the most important determinants for the development of the components of Met-S.

[fadiaafnan@yahoo.com](mailto:fadiaafnan@yahoo.com)

### **The effect of cardio protective diet rich with natural antioxidants on chronic inflammation and oxidized LDL during cardiac rehabilitation in patients after acute myocardial infarction**

**Polona Mlakar**  
University of Ljubljana, Slovenia

Chronic inflammation, the fundamental pathogenetic process of atherosclerosis can be modified by pharmacological and non-pharmacological measures as a part of secondary prevention after acute myocardial infarction (AMI). The aim of our study was to determine the effect of diet (as a part of cardiac rehabilitation (CR) program), rich with natural antioxidants on inflammatory markers and oxLDL, a marker of oxidative stress, closely involved in the process of chronic inflammation. 41 male patients after AMI undergoing two-week CR were divided into a diet group (supervised cardio protective diet during CR) and control group. We measured hsCRP, leucocytes, neutrophils, IL-6, oxLDL, exercise capacity and classic risk factors before and after CR program. Patients from the diet group presented with a significant decline in classic risk factors (BMI, waist circumference, waist to hip ratio, systolic blood pressure, heart rate, blood glucose, total cholesterol, LDL, TAG) and inflammatory markers (hsCRP, leucocytes, neutrophils) compared to control group. Furthermore, when studying non-smokers, we observed significant decline of oxLDL in the diet group. The addition of cardio protective diet rich with natural antioxidants to physical activity as a part of a CR program positively modifies not just classic risk factors and exercise capacity but also diminishes chronic inflammation markers. These effects and oxLDL decline were most prominent in non-smoking patients.

[blonca.mlakar@gmail.com](mailto:blonca.mlakar@gmail.com)