

(education, income, and residence), weight gain more than 6 kg compared to the previous year (odds ratio 3.619 [95% CI, 1.311–9.989]) was significantly associated with undiagnosed metabolic syndrome.

CONCLUSION: Recent weight gain ≥ 6 kg was independently associated with a higher risk of undiagnosed metabolic syndrome in apparently healthy non-obese young adults.

EP-075 | Is obesity the basis for the development of multimorbidity?

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INTRODUCTION: Multimorbidity is the occurrence of two or more chronic diseases within same individual. Malta has been reported to be a highly prevalent obese European country. Exploring this population provides ideal setting in understanding the phenotypic characteristics of obesity as a multimorbidity disease.

METHOD: Data were obtained from a health examination survey (2014–2016). The sample population was achieved by single stage stratification by age (18–70 years), sex, and towns; 47.15% response was achieved, contributing to a total population of 3,947 adults (male $n = 1,998$). The questionnaire along with examination results contributed to the labelling of the presence of chronic diseases (type 2 diabetes, obesity, hypertension, dyslipidaemia, myocardial infarction, and coronary heart disease) within the study population. Multimorbidity was defined as presence of two or more of the aforementioned diseases. Descriptive and analytic statistics were used to examine associations between multimorbidity, age, highest education, locality, body mass index, and sex.

RESULTS: Multimorbidity prevalence was 33.01% (CI95%: 31.58–34.50) with male predominance (58.48%; CI95%: 55.78–61.13), out of which 53.57% (CI95%: 50.85–56.26) had obesity as one of the underlying chronic diseases. However, majority of the multimorbidity population suffered from hypertension (96.55%; CI95%: 95.50–97.42), again with male predominance (58.03%; CI95%: 55.28–60.73), with 51.91% (CI95%: 49.15–54.66) being obese. On stratification, the presence of hypertension and myocardial infarction were present from 18- to 24-year age group for both sexes. Presence of obesity as a multimorbid disease was present from the 25- to 44-year age group. A low education level predominated within the multimorbidity population. However, 15.12% (CI95%: 13.27–17.17) of the multimorbidity population reported a high education (university or above). These were found to suffer from hypertension, cardiac, and dyslipidaemia comorbidities but not obesity. Hypertension was positively associated with development of dyslipidaemia (OR: 2.31; $p \leq 0.01$), obesity (OR: 2.53; $p \leq 0.01$), myocardial infarction (OR: 1.18; $p \leq 0.01$), and the combination of type 2 diabetes and obesity (OR: 3.39; $p \leq 0.01$) after adjusting for confounders.

CONCLUSION: Obesity was reported to be the entrance port to multimorbidity. However, this does not appear to be the case in this obesogenic population, where hypertension contributed to presence of multimorbidity from a young adult age. Hypertension was observed to be the potential driving factor for development of other chronic diseases. Although the study has limitations, it put forward the recommendation that prevention and regulation of hypertension should be high up in the public health preventive agenda along with obesity.

EP-076 | Effect of dietary protein source on body composition and cardiometabolic risk in obese young adults during anti-inflammatory weight management program

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INTRODUCTION: Many studies have shown that dietary protein content may play a role in weight management. Moreover, it has been found that diets high in protein (either animal or plant) significantly reduced markers of insulin resistance and hepatic necroinflammation independently of body weight change. This study aimed to examine the effect of dietary protein source on body composition and cardiometabolic risk factors in obese young adults during anti-inflammatory weight management program.

METHODS: A total of 56 participants (93% female, mean age 44 years, mean BMI 35.4 kg/m²) were enrolled in the study, and 42 of them completed the 24-week anti-inflammatory weight management program in the Obesity Outpatient Clinic at the Clinical Hospital Centre Rijeka, Croatia. Dietary protein intake was estimated from six 3-day food diaries. The inflammatory potential of diet was assessed with the Dietary Inflammatory Index (DII[®]). Body composition parameters were assessed by bioelectrical impedance analysis (Seca[®] mBCA 515, Hamburg, Germany). Serum concentrations of glucose, insulin, total cholesterol, HDL cholesterol, LDL cholesterol, triglycerides, and high sensitivity C-reactive protein from fasting blood samples were measured, and their correlation with dietary protein intake from animal or plant origin was examined.

RESULTS: On average, participants lost 7.1 kg ($P < 0.01$) over the 24-week period and reduced high sensitivity C-reactive protein concentration by 30% ($P < 0.01$). The inflammatory potential of their diet was significantly improved toward more anti-inflammatory potential