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Association between social class and metabolic syndrome in a Tunisian population

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Background and aims In Tunisia, demographic changes and social transition lead to many changes within the Tunisian population. The relationship between social class and metabolic syndrome has received little attention in recent years. In this study we sought to evaluate the consequences of these transitions in a sample of Tunisian subjects with metabolic syndrome.

Methods Three hundred ninety three of the general population, aged between 18-75 years, participated in this study. Education level, occupation, monthly income, age, body weight, body height, waist circumference, blood pressure were collected. Glycaemia, triglycerides, total cholesterol and HDL-cholesterol were measured. Participants were classified into two groups according to the health state: healthy (Group 1, n=105) and patient having metabolic syndrome according to the recent diagnostic criteria of the International Diabetes Federation and the American Heart Association/National Heart, Lung, and Blood Institute (2009) (Group 2, n=288).

Results Individuals with metabolic syndrome are older than healthy group (55.1±15.4 years vs 42.2±13.8 years), the most common in the healthy group are manufacturing and liberal profession while in patient group are retired or unemployed participants. Within the whole population 40% had primary level of study. Illiteracy is more frequent in group 2 than group 1 (34.1% vs 22.5%). Smoking behavior and alcohol drinking are similar in both groups. Additionally, our results show that the highest quintile of income (Q5) was recorded in group 1 with 15.9% against 1.4% in group 2.

Conclusion The current study strengthens that healthy participants are younger and more educated than patients. Lower education and monthly income level are associated with higher risk of metabolic syndrome among the Tunisian individuals.

The author hereby declares no conflict of interest

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Control of cardiovascular risk factors in revascularized patients with diabetes: Algerian experience

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Introduction and objectives Patients with type 2 diabetes and revascularized coronary disease are a group with very high cardiovascular risk that has been rarely studied. This Algerian study analyzes the clinical characteristics and risk factor control of these patients.

Methods The analysis selected patients with type 2 diabetes who had participated in a multicenter, observational study (military hospitals of Algeria) conducted in 978 patients >18 years of age who had undergone coronary surgery or percutaneous coronary intervention. Demographic and therapeutic variables, as well as clinical and analytical parameters, were collected and comparatively analyzed.

Results The mean age (standard deviation) of the 371 diabetic patients included in the analysis was 67.7 (9.6) years (71.3% men; mean time since revascularization, 3.5 years). Most (57.6%) were receiving treatment with oral hypoglycemics alone, where as 30.4% were receiving insulin alone or in combination. The mean glycohemoglobin figure was 7.3% (in 72%, <7.5%); 73.9% had been diagnosed with dyslipidemia. Mean low-density lipoprotein cholesterol was 93.5mg/dL (in 73%, >70mg/dL). Among these patients, 93.5% were receiving statins. A total of 76.4% had been diagnosed with hypertension; systolic/diastolic blood pressure was <130/80mmHg in 56% and <140/90mmHg in 93%.

Conclusions Cardiovascular risk and prevention may be improved in revascularized diabetic patients in Spain through further control of risk factors, particularly dyslipidemia.

Patients with glycohemoglobin >7.5% should be individually assessed in terms of glycemic targets.

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Erythrocyte membrane phospholipid fatty acids, dairy intakes and cardiovascular risk

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Introduction The impact of dairy fats on cardiovascular risk has been debated. Circulating Pentadecanoic (15:0) and heptadecanoic (17:0) saturated fatty acids are good biomarkers of dairy product consumption as they are mainly provided by dairy fats. We described the prevalence of cardiovascular risk factors according to erythrocyte membrane phospholipid content in 15:0 and 17:0 fatty acids.

Methods 402 women and men aged 45-64 were randomly selected in 2005-2007, from the general population of three French areas. Nutritional data were collected through a 3-day food record. Fatty acid content was measured in erythrocyte membrane phospholipids.

Results Erythrocyte membrane contents in 15:0 and 17:0 fatty acids significantly increased with the consumption of dairy products collected during the 3-day food record. Prevalence of hypertension significantly decreased from the lowest to the highest quartile of 15:0 erythrocyte content (48.1%; 33.3%; 29.9%; 25.5%; p=0.005). A similar trend was observed for metabolic syndrome prevalence (39.4%; 28.1%; 25.2%; 21.3%; p=0.029). Prevalence of hypertension, hypertriglyceridaemia, overweight and metabolic syndrome significantly decreased from the lowest to the highest quartile of 17:0 erythrocyte content (44.1%; 36.5%; 28.1%; 25.6%; p=0.020 for hypertension; 30.3%; 15.4%; 16.9%; 16.7%; p=0.017 for hypertriglyceridaemia; 68.1%; 58.7%; 46.6%; 44.4%; p=0.002 for overweight; and 43.2%; 26.9%; 22.5%; 17.8%; p<0.001 for metabolic syndrome). All these relationships remained significant after adjustment for age and gender. The link did not reach significance level for diabetes.

Conclusion Elevated erythrocyte membrane phospholipid contents in 15:0 and 17:0 saturated fatty acids are associated with a lower prevalence of the metabolic syndrome and several of its components. These results suggest that saturated fat intake should not be systematically associated with high cardiovascular risk and can be considered as part of a balanced diet.

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Impact of cardiovascular risk factors management on long-term all-cause and cardiovascular mortality: an observational study

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Background In clinical trials, lowering cardiovascular risk factors (RF) reduce cardiovascular (CV) morbidity and mortality. Nonetheless, few data exist on general population.