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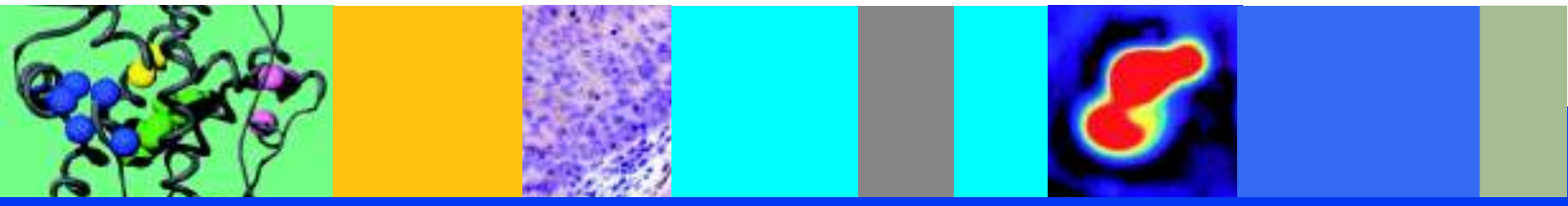

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Aim
To investigate the impact of overall obesity (Ob) and diabetes mellitus type 2 (DM2) on arterial stiffness and degree of insulin resistance in patients with arterial hypertension (AH) and abdominal Ob (AOb).
Design and method
74 subjects were divided according to presence of AH, AOb, Ob, and DM2 without insulin therapy. Control group 1 consisted of 26 subjects without AH, AOb, Ob, and DM2. All patients with AH were also diagnosed with AOb and amounted to 48 subjects. Then patients with AH and AOb were divided into two groups (groups 2 and 3 respectively) according to presence of Ob, defined by BMI and furthermore, DM2. Carotid-femoral pulse wave velocity (PWVc-f) measurements were performed using SphygmoCor. Homeostasis model assessment-insulin resistance (HOMA-IR) was calculated by the following formula: fasting plasma insulin (mU/ml) × fasting plasma glucose (mmol/l)/22.5.
Results
In the group comparison by BMI: PWVc-f and HOMA-IR increased consistently from groups 1 to 3. PWVc-f was significantly higher in hypertensive patients with AOb and Ob than in hypertensive patients with AOb and without Ob (PWVc-f = 8.69 ± 1.8 and PWVc-f = 7.43 ± 1.3; $P < 0.05$). HOMA-IR did not show significance. In the group comparison by presence of DM2: PWVc-f and HOMA-IR increased consistently from groups 1 to 3. PWVc-f and HOMA-IR were significantly higher in hypertensive patients with AOb and DM2 than in hypertensive patients with Aob and without DM2 (PWVc-f = 9.5 ± 1.8 and PWVc-f = 7.71 ± 1.5, $P < 0.001$; and HOMA-IR = 7.09 ± 3.54 and HOMA-IR = 2.83 ± 1.2; $P < 0.001$). Significant differences between groups persisted after adjustment for age, sex, and BMI.
Conclusions
Presence of overall Ob together with AOb had a significant adverse effect on arterial stiffness in patients with AH both men and women. This adverse effect is similar with impact of DM2 on arterial stiffness in patients with AH together with AOb. Measurement of PWVc-f showed higher significance vs HOMA-IR measurements in the study groups.

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EP570

Metabolism of sphingolipids in experimental obesity and insulin resistance

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Sphingolipids constitute the structural base for all types of biological membranes, and are numerous in human and animal tissues. Metabolites of sphingolipids act as biological effectors, modulators and mediators in a number of biochemical processes; they are known to be pathogens in various human pathologies.
We aimed at studying activity of sphingomyelinase, concentrations of sphingomyelin and its metabolites, such as ceramide and sphingosine, in organs of rats with experimental diabetes.
Experimental model of obesity and insulin resistance was used to study activity of sphingomyelinase, and concentrations of sphingosine and ceramide. As compared with the controls, in the liver of experimental animals activity of neutral and acid sphingomyelinase was found to increase by 25 and 21% respectively. In skeletal muscles of obese animals, activity of neutral and acid sphingomyelinase increased by 45 and 70% respectively. The findings can be the evidence for stimulation of sphingomyelinase activity in the liver and skeletal muscles in rats with experimental obesity. Significant alterations in the content of sphingomyelin and its metabolites were observed in obese rats; these alterations were found to be oppositely directed. In the liver of obese rats, sphingomyelin was found to decrease by 25%; while in skeletal muscles its concentration decreased more than by 31%. Concentrations of ceramide and sphingosine in the liver of obese rats were found to increase by 15 and 23%, respectively, as compared with the controls. In skeletal muscle of obese rats, concentrations of ceramide and sphingosine increased by 19 and 68% respectively.
We have established increase in the activity of sphingomyelinase and accumulation of ceramide and sphingosine, metabolites of sphingomyelin, in the liver and skeletal muscles of rats with experimental obesity and insulin resistance. Ceramide overproduction plays a key role in the onset and development of insulin resistance.

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EP571

Adiponectin response to vegetarian diet is gender-dependent and inversely related to uric acid

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Introduction
Beneficial influence of vegetarian dietary habits in reducing common risk factors of metabolic syndrome has been recently evidenced. However, adiponectin production and secretion has been scarcely studied in vegetarians, despite its important potential in recovering metabolic homeostasis by reducing inflammation and insulin resistance.
The aim of this study was to evaluate the influence of vegetarian diet on serum adiponectin levels and it's association to the established inflammatory and metabolic biomarkers.
Methods/design
Total serum adiponectin (ADN), leukocytes (L), CRP, plasma glucose (PG), insulin (INS), and uric acid (UA) were measured in healthy, non-obese, age-matched vegetarian ($n = 40$; M/F = 16/24) and omnivore subjects ($n = 39$; M/F = 15/24). HOMA-2 model was used for the assessment of β-cell function (BS), insulin sensitivity (IS), and insulin resistance index (IRI).
Results
Serum ADN levels were significantly higher in female vegetarians than the respective omnivore controls (14.2 ± 5.82 mg/l vs 10.82 ± 3.29 mg/l; $P = 0.017$), whereas no dietary-associated difference was observed in male vegetarian and omnivore subjects respectively (6.87 ± 2.57 mg/l vs 6.74 ± 3.07 mg/l; $P = 0.898$). Stepwise multiple regression analysis identified uric acid as the significant negative determinant of ADN in vegetarians ($r_{partial} = -0.4585$, $P = 0.002$), while in omnivore subjects only BMI was found to be significantly associated to ADN levels ($r_{partial} = -0.4439$, $P = 0.016$). In comparison to controls, significantly lower INS (47.6 ± 19.2 pmol/l vs 57.7 ± 23.7 pmol/l; $P = 0.042$) and IRI (1.01 ± 0.42 vs 1.22 ± 0.49; $P = 0.041$), as well as higher BS ($115.5 \pm 42.9\%$ vs $94.2 \pm 35.3\%$; $P = 0.019$) were found in vegetarians.
Conclusion
Vegetarian dietary habits result into improved insulin sensitivity and β-cell function. Gender diversity in adiponectin response and inverse association to uric acid indicate distinct effects of vegetarian diet to adipose tissue metabolism.
Disclosure
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EP572

Fibrate therapy predispose to influenza vaccine-induced rabdomyolysis

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Introduction
Fibrates are widely used to manage dyslipidemia but these drugs can induce rhabdomyolysis with acute renal failure. Rhabdomyolysis is a skeletal muscle cell damage condition associated with the release of toxic components of the cells and to the end;renal failure. The onset of rhabdomyolisis can extend to 6 months with fibrate therapy. Some researchers purpose that the influenza vaccıne can induce the rhabdomyolisis in patients who receive myotoxic drugs.Here we present a case who develops rhabdomyolisis and acute renal failure after influenza vaccine during fibrate therapy.
Case
A 65-year-old male patient admitted to the hospital with weakness and pain of the extremity muscles. He had tenderness widespread of the body and feel difficulty to move. He had coronary heart disease and hyperlipidemia. He was taking 267 mg of fenofibrate daily for 5 months and had influenza vaccine administration a week before admission to the hospital. Laboratory examination showed markedly elevated serum creatine kinase levels (27 730 U/l) and creatinine was