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 pathogenic 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 evidence for stimulation of sphingomyelinase activity in the liver and skeletal muscle 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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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 its 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; FM/F = 16/24) and omnivore subjects (n = 39; FM/F = 15/24). HOME-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 ± 5.8 mg/dl vs 10.8 ± 3.29 mg/dl; P = 0.017), whereas no dietary-associated difference was observed in male vegetarian and omnivore subjects respectively (6.87 ± 2.57 mg/dl vs 6.74 ± 3.07 mg/dl; P = 0.898). Stepwise multiple regression analysis identified uric acid as the significant negative determinant of ADN in vegetarians (β = −0.458; P = 0.002), while in omnivore subjects only BMI was found to be significantly associated to ADN levels (β = 0.443; P = 0.016). In comparison to controls, significantly lower INS (47.6 ± 19.2 pmol/l vs 57.2 ± 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 ± 42.96% vs 94.2 ± 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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Fibrates therapy predispose to influenza vaccine-induced rabdomyolysis
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We previously presented a case who develops rhabdomyolysis and acute renal failure after influenza vaccine administration. Fibrates are widely used to manage dyslipidemia but these drugs can induce metabolism and produce serious adverse effects such as rhabdomyolysis and acute renal failure.

Fibrates are widely used to manage dyslipidemia but these drugs can induce rhabdomyolysis and 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 rhabdomyolysis can extend to 6 months with the fibrates. Some researchers' viewpoint is that the influenza vaccine can induce the rhabdomyolysis in patients who receive mycotic drugs. Here we present a case who develops rhabdomyolysis and acute renal failure after influenza vaccine during fibrates 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...