Abstract

Background and aims: Concomitant intake of statins together with certain foods may affect their therapeutic effects. The purpose of this preliminary study was to determine the modulating effect of two culinary oils on the hypolipemic effect of statins. Subject and Methods: Twenty-five men with severe hypercholesterolemia and high estimate cardiovascular risk (> 20% according to the Adult Treatment Panel III of USA National Institutes of Health, ATP-III) were enrolled in an observational follow-up study to test lipoprotein profile changes after six month 20-mg/d Simvastatin treatment. Thirteen volunteers using sunflower oil as the habitual culinary fat, and 12 using olive oil, were selected by non-probabilistic incidental sampling. Volunteers consent in follow their habitual diets and to maintain diet characteristics throughout the study. Diet was evaluated through the study by three 24-h recalls and a food frequency questionnaire. Results: The energy contribution of fat (P = 0.019) and MUFA (P < 0.001) was higher in the olive oil-group while that of PUFA (P = 0.001) and alcohol (P = 0.005) was higher in the sunflower oil-group. TC/HDL-cholesterol and the ATP-III 10-year risk percent decreased more (P < 0.05) in the olive oil group. TC and the TC/HDL-cholesterol and the LDL-cholesterol/HDL-cholesterol ratios and the ATP-III 10-year risk percent decreased significantly more (P < 0.05) in the olive oil-group after BMI, energy and alcohol intakes were adjusted. Conclusion: Data suggest that although Simvastatin is a very effective hypolipemic drug, olive oil-diets in preference to sunflower oil-diets must be consumed in patients with high cardiovascular risk.

Keywords

Simvastatin, Olive oil, Sunflower oil, Cholesterol, Lipoprotein-cholesterol, Cardiovascular risk, Drug-food interaction.