THE EFFECT OF PRAVASTATIN IN THE METABOLISM OF LIPIDS AND CARBOHYDRATES ON NON DIABETIC PATIENTS WITH HYPERLIPIDEMIA-A SIMULTANEOUS STUDY OF THE ALTERATION IN THE GLUCOSE CURVE

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We studied the effect of pravastatin in the lipidemic profile of the serum, and over the metabolism of carbohydrates. The material consisted of 60 non-diabetic patients (22 males and 38 females) with pathological serum of cholesterol (CHOL) or Triglyceride (TG) or Both.

Those patients, after the measurement of the values in serum of CHOL, TG, LDL (chol) and LDL (chol) were submitted to a glucose tolerance test with measurements of the serum glucose values from blood samples obtained every half an hour.

Following that they were administered a two months treatment of pravachol (20 mg X 1) per-os. During the re-examination a statistically important reduction ($p < 0.001$) of the chol, TG, and LDL-chol values was found, while the value of HDL-chol was increased, but not a statistically important levels ($p > 0.5$). We also observed a decrease of the glucose values of the serum which were statistically important ($p < 0.01$) at the end of the second hour of the glucose tolerance test.

DOES SMOKING CHANGE CLINICAL PICTURE OF ATHEROSCLEROSIS IN TYPE 2 DIABETES MELLITUS?

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Several risk factors of atherosclerosis have been identified and their impact on cardiovascular complications evaluated in a number of epidemiological studies. However, the effect of smoking on the organ distribution of atherosclerosis with the coexistence of another strong risk factors is not clear. We evaluated the clinical consequences of tobacco smoking in the group of patients with type 2 diabetes mellitus.

The clinical charts of 91 patients with type 2 diabetes mellitus (50 women and 28 men, mean age 64.5 years, age range 44–85 years) were analyzed; 58 of them smoked but 33 did not.

Smoking diabetics were admitted to the hospital at the mean age of 61.4 ± 8.5 and non-smoking at the mean age of 67 ± 8.3 years (difference statistically significant, $p = 0.005$). The incidence of most cardiovascular complications were similar in smoking and non-smoking diabetics: myocardial infarction 25% v 31%, coronary heart disease 75% v 79%, peripheral arterial occlusive disease 75% v 67%. Likewise, diabetic microangiopathy occurred in smoking and non-smoking diabetic patients at the same rate: retinopathy 45% v 48%, nephropathy 25% v 34%, and neuropathy 65% v 79%. Stroke and TIA was common in non-smoking diabetics then in smoking: 36% v 15% and 28% v 15% respectively. Since hypertension, dislipidemias and obesity were distributed evenly between these two group of patients their effect on clinical picture can be consider equal.

Smoking diabetics develop cardiovascular complications earlier then non-smoking. Non-smoking diabetics have higher percentage of cerebrovascular accidents while smoking diabetics showed tendency toward more common coronary atherosclerosis.

THE EFFECT OF SMOKING ON PROGRESSION AND CLINICAL CHARACTERISTICS OF ATHEROSCLEROSIS IN HYPERTENSIVE PATIENTS

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Hypertension is a very strong risk factor for atherosclerosis, but seems to be more associated with cerebro-vascular accidents than myocardial infarction. Smoking is recognized as a very potent risk factor for coronary heart disease but its effects on stroke is not certain. The aim of the study was to evaluate the effect of smoking as a contribution to hypertension on the clinical picture of atherosclerotic complications.

We looked at the clinical characteristics of 148 patients with hypertension (100 women and 48 men, mean age 63.3 years, age range 38–87 years), comparing those who smoke (32), do not smoke (92), or have a history of smoking (24).

Obesity, lipids and carbohydrates metabolism disorders were distributed evenly between these groups. Smoking individuals developed hypertension earlier in their life than non smoking patients (mean age of onset: 47 years v 54.5 years respectively), and developed atherosclerotic complications faster (after 7.8 years v 11.8 years of hypertension). Some of the vascularcomplications occurred in smoking and non smoking patients with the same incidence: coronary heart disease (78% v 77%), stroce (19% v 24%). Myocardial infarction occurred in 22% of smoking but in 9% of non-smoking patients with hypertension, and 15.6% smoking individual had peripheral occlusive vascular disease, but 7.6% of non-smoking patients (both differences were however, at the edge of statistical significance - $p < 0.05$). Patients with the history of smoking had intermediate distribution of vascular complications.

Early onset of hypertension and earlier development of cardiovascular complications confirm substantial contribution of smoking to the morbidity of the patients, whereas clinical pictures of smoking and not-smoking individuals with symptomatic atherosclerosis do not differ significantly.

RELATIONSHIP OF APOLIPOPROTEIN H AND CARDIOVASCULAR RISK FACTORS

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Apolipoprotein H (apo H), also known as beta2-glycoprotein I has recently become of considerable interest in the haemostasis field. Given the reports that apo H is elevated in diabetes mellitus and hyperlipidaemia, we wished to test the hypothesis that serum apo H concentration was related to fasting plasma glucose and insulin as well as blood pressure, body mass index, hip/waist ratio and serum lipids in normal individuals. Eighty-one healthy young subjects (46 females and 35 males) were recruited. Their age was 20.7 ± 0.75 years. Serum apo H univariately correlated with fasting plasma glucose ($r = 0.24$, $P < 0.03$) and serum LDL-cholesterol ($r = 0.30$, $P < 0.01$). In stepwise multiple regression analysis insulin resistance index, plasma fasting glucose and insulin, systolic and diastolic blood pressure, BMI and waist/hip ratio were included in the model with serum apo H as the dependent variable. Serum apo H significantly and independently correlated with fasting serum cholesterol ($r = 0.072$, $P < 0.01$) and LDL-cholesterol ($r = 0.143$, $P < 0.0001$) in the 81 subjects. When individual sexes were studied it was found that there was only a significant independent correlation in stepwise multiple regression between serum apo H and serum cholesterol ($r = 0.136$, $P < 0.02$) in females but not males for any of the studied variables.

CLINICAL AND INSTRUMENTAL EVALUATION OF LDL-APHERESIS ON 11 PATIENTS WITH A 10 YEARS FOLLOW-UP

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In homozygous hypercholesterolemic patients (FH) LDL-apheresis allows the achievements of low levels of LDL-C especially when associate with statins. In severe heterozygous FH and in not responders to hypolipidemic treatment, apheresis could be considered the only efficacious therapy. As now well demonstrated by literature and trials, this therapy is able to arrest the progression or even to cause the regression of coronary and extracoronary artery diseases. Evidences of clinical usefulness depend on patients examined, duration of treatments, intraapheresis intervals and selectivity of apheresis procedures (affinity for Apo B-lipoporteins).

Aims: of our work is to evaluate apheresis clinical and instrumental results in 11 patients during 10 years of follow-up.

Materials and Methods: In our Centre from 1987 to 1997, we have treated 11 patients (female = 2, male = 9, age: 51.7 years, range: 29–64 yrs). Eight of them are affected by heterozygous FH, 3 show severe familial combined hyperlipidemia. In 1996, one patient stopped the apheresis for the occurrence of a gastric linphoma. The apheresis is performed regularly every 15–20 days by using an automated dextran sulfate cellulose adsorption system. All patients receive a concomitant hypolipidemic therapy, (statin, statin + fibrates or colestiramine) and the best cardiological treatment.

Results: LDL-apheresis significantly reduces total cholesterol-TC, LDL-cholesterol, Triglycerides-TG, apolipoprotein B100 and fibrinogen; reduction of HDL-cholesterol and apolipoprotein A1 is not significant. The following table resumes all patients mean values of pre-aferesis, post-apheresis and percent difference of all treatments performed (n° = 834) in 10 years.