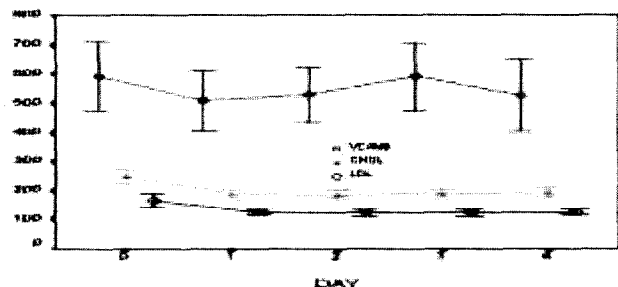


Results: The serum C (250.9±38.5 vs.187.0±24.5mg/dl P<0.05) and LDL-C(170.7±42.2 vs. 123.8±18.0mg/dl,P<0.05) decreased significantly after A. However, no significant elevation of C and LDL-C was noted after withdrawal of A. The VCAM-1(592.01±208.31 vs508.43±178.04 ng/ml) and the ISO(14.43±8.91 vs10.56±3.31 pg/ml) were significantly decreased and the IPA(8.73±3.82 vs. 11.33 ± 4.50 ng/ml) was significantly elevated after A. Of note, the VCAM-1 and ISO were significantly increased to 591.18 ± 203.65ng/ml and 12.34 ± 4.53 ng/ml respectively at day 2 after withdrawal of A. The IPA decreased significantly to 9.98±3.67 ng/ml at day 3.

Conclusion: After 12 wks of A, the positive pleiotropic effects of statin are demonstrated simultaneously with lowering the serum C. However, after withdrawal of A, these pleiotropic effects are significantly abrogated within days and are independent on the elevation of serum C.



1156-154

Prevalence of Risk Factors for Coronary Disease in Myocardial Infarction in the Community

Francisco Lopez-Jimenez, Steven J. Jacobsen, Guy S. Reeder, Susan A. Weston, Jill M. Killian, Ryan Meverden, Véronique L. Roger, Mayo Clinic, Rochester, MN

While reports suggest that the prevalence of cardiovascular risk factors (CV RF) in acute myocardial infarction (MI) may be low, there is a paucity of data on the prevalence of modifiable CV RF among patients with MI in a geographically defined population, and it is not known whether the prevalence is changing over time.

OBJECTIVES: To determine the overall prevalence of CV RF among patients with MI in the population and their change over time.

DESIGN: Population-based MI incidence cohort.

METHODS: We analyzed the prevalence of major modifiable CV RF including overweight/obesity, history of smoking, diabetes mellitus, hypertension and hyperlipidemia; and non-modifiable CV RF including age ≥75 years, male sex or family history of coronary disease among all residents of Olmsted County, MN, hospitalized for a validated incident MI between 1979 and 1998. Demographic and clinical characteristics were collected from community medical records.

RESULTS: During the study period, 2,277 subjects had a MI. Only 3.6% of patients did not have modifiable CV RF. When compared to patients with a MI from 1979-83, patients who had the MI from 1994-98 were more likely to be overweight/obese, 72% vs. 58%; or to have history of hypertension, 61% vs. 50%; or hyperlipidemia, 44% vs. 21%; and less likely to have history of smoking, 65% vs. 70%; or to be male, 55% vs. 61%, all with a P<0.05 including the four 5-year groups. There was no difference in the prevalence of diabetes, family history of coronary disease or being ≥75 years old. In patients ≤65 years of age, those who had a MI from 1994-98 were 72% more likely to be obese (BMI ≥30 Kg/m²) 43% vs. 25%; and either overweight or obese, 82% vs. 70%; and more likely to have diagnosis of hyperlipidemia, 47% vs. 29%; but less likely to have history of smoking, 79% vs. 89%, than patients who had the MI 15 years earlier. The prevalence of patients with ≥4 major modifiable CV RF increased from 13% to 22% in the same period.

CONCLUSIONS: Conversely to what has been reported in other settings, very few patients with incident MI in the community do not have any CV RF. The high prevalence and average number of modifiable CV RF and their trend in patients with MI is underscoring the importance of secondary prevention after MI.

ORAL CONTRIBUTIONS

845 The Metabolic Syndrome and Implications of ATP III

Tuesday, April 01, 2003, 10:30 a.m.-Noon
McCormick Place, Room S403

10:30 a.m.

845-1

The Influence of the Metabolic Syndrome on 24-Year Mortality Among Middle-Aged Men in the Multiple Risk Factor Intervention Trial (MRFIT)

Jerome D. Cohen, Lynn E. Eberly, Ronald Prineas, Gabriela Vasquez, MRFIT Research Group, Saint Louis University, St. Louis, MO, University of Minnesota, Minneapolis, MN

Background: The Metabolic Syndrome (MS) has been recently defined and identified as an important clustering of risk factors for cardiovascular disease (CVD). We explored the long-term mortality of men with MS and with or without concurrent untreated diabetes mellitus (DM).

Methods: 12,617 men who participated in the MRFIT were classified according to base-

line presence of MS and/or DM not on hypoglycemic agents. MS was defined as three or more of: body mass index 30+ kg/m², triglycerides 150+ mg/dL, high-density-lipoprotein cholesterol <40 mg/dL, blood pressure 130+ / 85+ mm Hg, and fasting glucose 110+ mg/dL. Untreated DM was defined as fasting glucose 126+ mg/dL and not on hypoglycemic agents. Proportional hazards regression models were fit for total and CVD mortality with adjustment for age, race, cigarette smoking, alcoholic drinks, total cholesterol, uric acid, and randomized treatment group (intervention: smoking cessation counseling, dietary counseling to lower cholesterol, and hypertension medication; control: usual care by personal physician).

Results: 4,735 men had MS only, 57 had DM only, and 355 had both; 42 men on hypoglycemic agents were excluded. There were 4,556 total and 2,221 CVD deaths over median follow-up of 24.4 years. Average blood pressure was reduced from 135/91 mm Hg at baseline to 124/82 after 6 years; average cholesterol was reduced from 240 to 231 mg/dL. Adjusted hazard ratios (HR) for CVD mortality relative to those with neither MS nor DM were 1.27 for those with MS only [p<0.0001], 1.37 for those with DM only [p=0.28], and 1.99 for those with both MS and DM [p<0.0001]. Results were similar for total mortality with HRs of 1.15 [p<0.0001], 1.63 [p=0.01], and 1.68 [p<0.0001] respectively.

Conclusions: The presence of MS with or without untreated DM was associated with a significantly increased risk in mortality compared to those with neither MS nor DM. Thus the treatment of MS and its individual components are an important part of the strategy for the prevention of CVD.

10:45 a.m.

845-2

Niacin Decreases Myocardial Infarction and Total Mortality in Patients With Metabolic Syndrome: Results From the Coronary Drug Project

Paul L. Canner, Curt D. Furberg, Michael L. Terrin, Mark E. McGovern, Maryland Medical Research Institute, Baltimore, MD, Wake Forest University, Winston-Salem, NC

Background: In the Coronary Drug Project (CDP), niacin decreased recurrent nonfatal myocardial infarction (NFMi) by 28% at 6 years (study end) and total mortality by 11% at 15 years (9 years post-trial). Since niacin may affect insulin sensitivity, and new national guidelines emphasize the importance of metabolic syndrome (MS), we evaluated whether niacin's effects on clinical outcomes were similar in patients with and without MS. We therefore analyzed results in that subgroup from CDP using National Cholesterol Education Program Adult Treatment Panel III criteria.

Methods: We defined MS as at least 3 of: triglycerides ≥150 mg/dL; blood pressure ≥130/≥85 mmHg; fasting glucose ≥110 but <126 mg/dL; or body mass index ≥28 (as a substitute for waist circumference). High-density lipoprotein cholesterol (HDL-C) had been measured in a small number of patients (N=492), so a second analysis added HDL-C < 40 mg/dL as a criterion for MS. Relative hazards (RH) and Z-values for homogeneity of treatment effect between subgroups were computed.

Results: Results are shown below. The Z-values for homogeneity indicate no significant difference in effect between patients with and without MS. For the subpopulation with HDL-C values, event rates overall were: NFMi 8.7% for niacin versus 15.2% for placebo (Z = -1.92, RH = 0.55); total mortality, 58.0% for niacin versus 66.1% for placebo (Z = -1.69, RH = 0.80).

Conclusions: We conclude that in the CDP, niacin reduced NFMi and mortality in patients both with and without MS.

Coronary Drug Project Results in Patients With or Without Metabolic Syndrome

	NFMi (6 years)		Total Mortality (15 years)	
	+MS N=563	-MS N=3,343	+MS N=563	-MS N=3,343
Niacin %	12.2	10.0	58.3	50.9
Placebo %	16.0	14.0	61.7	57.4
Relative Hazard	0.75	0.70	0.91	0.83
Z(homogeneity)	0.07		0.64	
Analysis Including HDL-C				
	+MS N=124	-MS N=368	+MS N=124	-MS N=368
Niacin %	8.8	8.7	52.9	59.6
Placebo %	25.6	11.7	64.4	66.7
Relative Hazard	0.31	0.72	0.73	0.83
Z (homogeneity)	-1.74		-0.40	

11:00 a.m.

845-3

The Metabolic Syndrome is an Independent Predictor of Cardiac Events in WOSCOPS Males

Gilbert J. L'italien, Ian Ford, James Shepherd, Bristol Myers-Squibb, Wallingford, CT, University of Glasgow, Glasgow, United Kingdom

Background: The Metabolic Syndrome (METS) is characterized by component conditions of dyslipidemia, hypertension, insulin resistance, and obesity. Although the syndrome is recognized as a CHD risk equivalent by the ATPIII guidelines committee, there