ARIC MANUSCRIPT PROPOSAL FORM

Manuscript #313

1. Title: Association between serum uric acid and asymptomatic carotid atherosclerosis: the ARIC study

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3. Timeline:

Preliminary Analysis	05/95
Manuscript Preparation	06/95
Circulation to Coauthors	06/95

4. Rationale:

Most major studies have found that the association of serum uric acid (SUA) with risk of coronary heart disease (CHD) is explained by confounding influences of obesity, hypertension, diuretic use and triglyceride level. Further, it appears that the indirect association of SUA to CHD may be a reflection of abnormalities in insulin metabolism.

5. Main Hypothesis:

It is hypothesized that baseline SUA level, after controlling for correlates of SUA, will not be related to intima media thickness at visit 1.

6. Secondary Hypothesis

The relation of SUA with asymptomatic atherosclerosis will differ between those with "multiple metabolic syndrome" ("syndrome X") and those without. The "multiple metabolic syndrome" is defined as having:

Hypertension (DBP ge 90 mmHg and SBP ge 140 mmHg or current use of antihypertensive drugs)
Dyslipidemia: HDL < 35 mg/dL
Triglyceride ge 190 mg/dL
LDL ge 160 mg/dL
Diabetes/Elevated fasting blood glucose: ge 140 mg/dL
Hyperinsulinemia: insulin ge 20 microU/L
Obesity: women BMI ge 36.3 kg/m^2; men BMI ge 32.5 kg/m^2 (based on ARIC 90th percentile cutpoints)
Central Adiposity: WHR ge 1.03 men; 1.0 women (based on ARIC 90th percentile cutpoints)

7. Data:

Visit 1 variables: serum uric acid, intima media thickness, age, gender, center, alcohol, smoking, total cholesterol, LDL, HDL, triglycerides, systolic blood pressure, diastolic blood pressure, antihypertensive medications, diuretics, beta blockers, diabetes, blood glucose, physical activity, body mass index, waist to hip ratio, insulin, fibrinogen, creatinine, BUN, prevalent CHD and stroke, protein of animal origin, total calorie intake

Exclusions: Prevalent CHD, stroke and missing data