

ARIC MANUSCRIPT PROPOSAL FORM

Manuscript #313

1. Title: Association between serum uric acid and asymptomatic carotid atherosclerosis: the ARIC study
2. Writing Group: Iribarren C, Folsom A, Eckfeldt JH, McGovern PG, Nieto FJ, CSCC representative
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 $\geq$ 90 mmHg and SBP $\geq$ 140 mmHg or current use of antihypertensive drugs)

Dyslipidemia: HDL < 35 mg/dL

Triglyceride $\geq$ 190 mg/dL

LDL $\geq$ 160 mg/dL

Diabetes/Elevated fasting blood glucose: $\geq$ 140 mg/dL

Hyperinsulinemia: insulin $\geq$ 20 microU/L

Obesity: women BMI $\geq$ 36.3 kg/m²; men BMI $\geq$ 32.5 kg/m² (based on ARIC 90th percentile cutpoints)

Central Adiposity: WHR $\geq$ 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