ARIC MANUSCRIPT PROPOSAL FORM

Manuscript #313

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


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