

ARIC MANUSCRIPT PROPOSAL FORM

Manuscript #400

1. Full Title: Migraine and Preclinical/Clinical Cardiovascular Disease and its Risk Factors: The Atherosclerosis Risk in Communities (ARIC) Study

Abbreviated Title (length 26): Migraine and CVD

2. Writing Group (list individual with lead responsibility first):

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3. Timeline:

Migraine data from visit 3 now available for entire cohort. Prevalent disease data from Visit 1, 2, and 3 now available. Incident data from Visit 1, Visit 2 and Year 1 (1993) of Visit 3 now available. Analyses can begin immediately and rerun for clinical events once all incident data become available. Official Coordinating Center analysis should not be necessary for any of these manuscripts as the only new variable will be that for migraine headache. This will be submitted for MS #363.

4. Rationale:

Migraine headaches may be an early marker of subsequent cardiovascular disease. It has been previously associated with both coronary heart disease and cerebrovascular disease in non-representative samples, using many different migraine definitions. The literature on the association between migraine and CVD risk factors is equivocal, while the relationship of migraine to preclinical atherosclerosis has not been previously reported. Finally no studies have examined the relationship between migraine and any measure of CVD in blacks, who have higher disease risk and may be at higher risk for migraines.

The ARIC study offers the unique opportunity to examine relationships between migraine and CHD risk factors/preclinical atherosclerosis/CVD in a biracial, population-based sample using the "gold-standard" 1988 International Headache Society (IHS) criteria for migraine, which were collected in Visit 3.

5. Main Hypothesis:

- 1) Migraine is associated with:
 - a) an adverse CVD risk factor profile;
 - b) a higher prevalence of preclinical disease;
 - c) a higher prevalence of clinical disease.
- 2) These relationships do not vary by gender or ethnicity.

6. Data (variables, time window, source, inclusions/exclusions):

Migraine: (Visit 3)

Questions 13-24, Personal History Form

Outcomes:

Preclinical Atherosclerosis: (Visit 1-3 cohort)

Wall Thickness/Plaque, shadowing 9 level variable, Visit 3

TIA/stroke symptoms

Risk Factors: (Visit 1-3 cohort)

Hypertension

Diabetes

Obesity

Family history of CHD

Cigarette smoking

Alcohol intake

Lipid levels

Fibrinogen

(Past) birth control pill use

Menopausal status

Hormone replacement therapy use

Medication use [aspirin (annual follow-up), NSAIDs, coumadin, beta-blockers, calcium-channel blockers]

Clinical Outcomes: (Visit 1-3 cohort and Incident Event Files)

CHD (including angina)

Stroke/TIA

?Peripheral vascular disease? (Rose intermittent claudication, ankle/brachial index (preclinical?))