

# CHD Well Underway at Time of RA Diagnosis

*Two years before diagnosis, RA patients were three times more likely to have been hospitalized for MI.*

BY DOUG BRUNK  
San Diego Bureau

Well before rheumatoid arthritis patients receive their diagnosis, they are three to six times more likely than are those without the disease to suffer acute myocardial infarction, results from a large retrospective study have shown.

The results support the idea that the heart disease associated with rheumatoid arthritis (RA) is not an issue for the back burner.

Physicians and their patients need to recognize that heart disease may not only be present, but well underway and quite serious at the time of RA diagnosis, the study's lead author, Hilal Maradit-Kremers, M.D., said in an interview.

Furthermore, the findings "certainly fit with the sense that a period of systemic inflammation antedates the clinical diagnosis of RA, and this systemic inflammatory burden increases cardiovascular risk," said Mary Chester Wasko, M.D., of the division of rheumatology and clinical immunology at the University of Pittsburgh, who was not affiliated with the study.

Dr. Maradit-Kremers and her associates

at the Mayo Clinic, Rochester, Minn., conducted the population-based cohort study, which involved 603 Rochester residents who fulfilled American College of Rheumatology (ACR) criteria for RA between January 1955 and January 1995, and 603 age- and gender-matched controls from the area (Arthritis Rheum. 2005; 52:402-11).

They collected data on coronary heart disease (CHD) events and risk factors such as diabetes, hypertension, dyslipidemia, body mass index, and tobacco smoking.

CHD events included hospitalization for MI, unrecognized MI, coronary revascularization procedures, and sudden CHD deaths.

The investigators used conditional logistic regression and Cox regression to estimate the risk of CHD associated with RA before and after the RA diagnosis.

The mean age of study participants in both cohorts was 58 years, and nearly three-fourths (73%) were female.

The investigators observed that 2 years prior to being diagnosed with RA, pa-

tients with the disease were 3.17 times more likely than were their non-RA counterparts to have been hospitalized for acute MI and 5.86 times more likely to have experienced unrecognized MIs.

After receiving their diagnosis of rheumatoid arthritis, those patients were 1.09 times more likely than their non-RA counterparts to be hospitalized with MI, 2.13 times more likely to have unrecognized MI, and 1.94

times more likely to experience sudden cardiac death.

The risk estimates did not change significantly when the investigators adjusted for the CHD risk factors.

In an interview, Dr. Maradit-Kremers called the findings "another piece of evidence that inflammation is related to atherosclerosis and coronary heart disease." The findings support the use of RA as a model to study the effects of chronic inflammation on the cardiovascular system.

"We haven't studied whether a more vigilant approach [to monitoring RA patients for heart disease] would be more beneficial, but our findings imply that it would be beneficial," Dr. Maradit-Kremers added.

At baseline, 30% of the RA patients

were current smokers and 26% were former smokers, compared with 24% and 20% of the non-RA patients, respectively. "When we think about interventions that a physician might implement to reduce cardiovascular risk, smoking is one that really stands out," Dr. Wasko said. "Physicians need to be proactive about trying to minimize modifiable risk factors such as tobacco use."

Limitations of the study, the investigators noted, include the fact that more than 95% of the study population was white and that only 57% of the RA patients received a disease-modifying antirheumatic drug.

Dr. Wasko pointed out that RA is more effectively controlled with disease modifying agents today than it was when the study ended in 1995. "One wonders if the study cohort were larger, or if the study were extended through the current era, perhaps the findings would be different," Dr. Wasko said.

"Earlier diagnosis of RA and prompt initiation of effective disease-modifying agents such as methotrexate and anti-TNF [tumor necrosis factor] therapies may favorably impact CHD risk in patients with this disease," Dr. Wasko said.

"This research is unique and is an interesting contribution to our understanding of both coronary heart disease and increased risk of CHD in RA," she added.

## CV Risk Factors Rising Fast in Native Americans

BY SHARON WORCESTER  
Tallahassee Bureau

ATLANTA — The prevalence of cardiovascular risk factors and cardiovascular disease is alarmingly high and continues to rise in Native Americans, according to several reports at a prevention conference on heart disease and stroke sponsored by the Centers for Disease Control and Prevention.

In one study of adult Native Americans (defined as American Indians and Alaska Natives) from Montana who took part in an annual telephone survey, significant increases were seen between 1999 and 2003 in the proportion reporting diabetes (12% vs. 16%), hypertension (26% vs. 34%), high cholesterol (23% vs. 30%), and obesity (34% vs. 39%). About 1,000 adults completed the survey in each of the four study years, Carrie S. Oser reported in a poster at the meeting.

After adjustment for age, sex, and survey year, the increases in the proportion reporting hypertension, high cholesterol, and obesity remained significant, said Ms. Oser of the Montana Department of Public Health and Human Services in Helena.

The prevalence of cardiovascular disease increased slightly from 10% to 11% over the course of the study, and smoking rates dropped slightly from 38% to 36%, although they remained high.

In another study of Native Americans in North Carolina, which has the eighth-

largest Native American population in the United States, age-adjusted rates of cardiovascular risk factor prevalence were compared with those of North Carolina whites and African Americans.

The 285 Native Americans studied in 2002 and the 230 studied in 2003 had higher rates of hypertension (40% vs. 27%), obesity (33% vs. 21%), and diabetes (14% vs. 7%) than did whites. They also were less likely than whites to engage in leisure-time physical activity (66% vs. 76%) and to engage in the recommended amount of physical activity for cardiovascular health (29% vs. 40%), and they were less likely to eat five or more servings of fruits and vegetables daily (19% vs. 25%) Sara L. Huston, Ph.D., reported in a poster.

Smoking and high cholesterol rates in this study were comparable in American Indians and whites. All cardiovascular risk factors were similar in Native Americans and African Americans, she said.

Both Ms. Oser and Dr. Huston were struck by the high prevalence of cardiovascular risk factors in Native Americans; the prevalence in this population had been largely unknown, noted Dr. Huston, who concluded that culturally appropriate intervention and prevention programs are needed to address the problem.

The need for such programs also was highlighted in another poster showing that with the rise in the prevalence of diabetes and hypertension in Native Americans is a likely risk in the prevalence of ischemic heart disease. Based on 2002

ambulatory care data from the Indian Health Service, the age-adjusted prevalence of ischemic heart disease among Native Americans and Native Alaskans aged 45 years and older was estimated to be nearly three times higher in those with diabetes than in those without diabetes (17% vs. 6%).

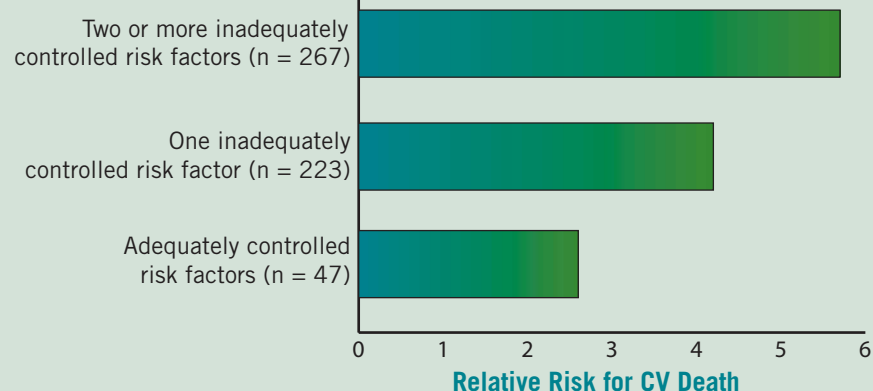
Those with hypertension but no diabetes had a higher age-adjusted prevalence of ischemic heart disease than did those with diabetes alone (13% vs. 7%).

Those with both diabetes and hypertension had the highest prevalence of ischemic heart disease (20%), reported Nilka Rios Burrows of the Centers for Disease Control and Prevention, Atlanta.

These rates are likely to rise in tandem with the increasing prevalence of diabetes and other cardiovascular risk factors in Native Americans; interventions to control blood glucose, lipid, and blood pressure levels would benefit this population, she said.

### DATA WATCH

#### Controlling CV Risk Factors Lowers Mortality in MI, Stroke Patients



Note: Based on data from the Second National Health and Nutrition Examination Survey Mortality Follow-Up Study, 1980-1992.  
Source: Stroke 2004;35:2346-50