

Autopsy findings suggest end of decline in coronary disease rates

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Autopsies of individuals in one Minnesota County suggest that the decades-long decline in the rate of coronary artery disease may have ended and possibly reversed after 2000, according to a report in the February 11 issue of Archives of Internal Medicine, one of the JAMA/Archives journals.

“Over the past century, the rate of death due to heart disease in the United States rose until the mid 1960s when it began a steady decline, which continues today,” the authors write as background information in the article. These declines appear to be accompanied by reductions in the incidence and death rates of coronary artery disease, the most common form of heart disease, characterized by blockages in the vessels that supply blood to the heart. The gold standard for detecting trends in the prevalence of coronary artery disease among the general population has been gathering information from autopsies. However, autopsy rates must be high to ensure that findings accurately reflect the general population. The national autopsy rate has never been high and continues to decline, with a national average of only 8.3 percent in 2003.

Olmsted County, Minnesota, has traditionally had high autopsy rates across all age groups. Rates are especially high for non-elderly individuals who died of unnatural causes (such as accidents, homicides or suicides). Cynthia Leibson, Ph.D., and colleagues from Mayo Clinic, Rochester, Minn., and the University of British Columbia, Vancouver, Canada, used data from death certificates and pathology reports to assess trends in coronary artery disease among Olmsted County residents age

16 through 64 who died of unnatural causes between 1981 and 2004.

A total of 3,237 Olmsted County residents in this age group died in those years, 515 of unnatural causes. Among those 515, 96 percent were autopsied and 82 percent (425) had grades assigned based on the amount of blockage in several coronary arteries, with grades ranging from zero (no blockage) to five (100 percent blocked).

“Over the full period (1981 to 2004), 8.2 percent of the 425 individuals had high-grade disease, and 83 percent had evidence of any disease,” the authors write. High-grade disease was defined as a grade of three or higher in the left main artery or a grade four or higher in any other single artery. Analyses adjusted to consider the individuals’ age and sex revealed declines over the entire period for high-grade disease, any disease and the average grade of disease. However, “declines in the grade of coronary disease ended after 1995 and possibly reversed after 2000.”

“Our finding that temporal declines in the grade of coronary artery disease at autopsy have ended, together with suggestive evidence that declines have recently reversed, provides some of the first data to support increasing concerns that declines in heart disease mortality may not continue,” the authors conclude. “The extent to which recent trends are attributable to the epidemics of obesity and diabetes mellitus awaits further investigation.”

Source: JAMA and Archives Journals

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