POSTER ABSTRACTS
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Chronic Disease
10

Cardiovascular Events in Chronic Renal Insufficiency

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Background: Information on cardiovascular disease (CVD) event rates among persons with chronic renal insufficiency (CRI) is not complete, particularly regarding the incidence of myocardial infarction (MI) and stroke. This gap in knowledge is important given that CRI can be easily detected, and that CVD event rates are very high in end-stage renal disease and diabetes, which is commonly associated with CRI.

Methods: Incidence rates of initial or repeat MI, stroke, and congestive heart failure (CHF) were calculated for the population with CRI at Kaiser Permanente Southern California. A CRI case identification database was created that identified members with serum creatinine >1.4 mg/dl in women and >1.9 mg/dl in men on two or more occasions more than 3 months apart using data from Jan. 1997 to Dec. 2000. Most of these patients also had their renal status reviewed by a pharmacist, or when necessary a nephrologist, to confirm a diagnosis of CRI. Hospital discharges with a principle diagnosis of MI, stroke, and CHF were determined. Events were counted only if they occurred >28 days after the initial elevated serum creatinine. Time was measured to the first of each CVD event or to the last serum creatinine before Jan. 2001.

Results: 7,107 members with CRI contributed data to the analysis. Among CRI patients, 43% had diabetes, 12% were <50 years old, 25% were 50-64 years, 43% were 65-79 years, and 20% were >80 years old. The mean observation time was 2.15 years. The median change in estimated glomerular filtration rate was –1.14 ml/min/1.73m2/year, with large variability. There were 23.1 hospitalizations for MI per 1,000 person-years, 16.2 for stroke, and 52.7 for CHF.

Conclusions: In this broad population with CRI, rates of MI, stroke, and CHF are high and appear to be similar to rates seen in populations with diabetes. These rates are step toward determining the risk for CVD events at varying levels of renal function prior to renal failure, with and without comorbid disease such as diabetes. Recognizing CVD risk among persons with CRI may lead to more aggressive CRI and vascular disease risk assessment and prevention.