Association Between Neighborhood Socioeconomic Context and Recurrent Coronary Events After MI

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Longitudinal data linking area-level socioeconomic status (SES) to repeated coronary events are limited. Using multiple failure-time data, the authors examined the association between neighborhood SES and acute coronary syndromes (ACS) in a cohort of myocardial infarction (MI) survivors. Consecutive patients aged ≤65 years released from 8 hospitals in central Israel after first MI in 1992-3 were followed through 2005. Recurrent MI and unstable angina pectoris (UAP) leading to hospitalization were recorded. Neighborhood SES was assessed through a composite census-derived index. Different variance-corrected proportional hazards models were used to account for multiple recurrent events: Andersen-Gill (AG), Wei-Lin-Weissfeld (WLW) and Prentice-Williams-Peterson (PWP). During follow-up, 531 recurrent MIs and 1,584 UAP episodes occurred among 1,164 patients. Estimates of recurrent ACS by neighborhood SES tertiles are shown in the Figure. Adjusting for known prognostic factors and individual SES using the AG model, higher estimated hazards were associated with poor neighborood SES (HR = 1.55, 95% CI: 1.13, 2.14 for recurrent MI; and 1.48, 95% CI: 1.22, 1.79 for UAP; in the 5th vs. 95th percentiles). The WLW and PWP models yielded similar results. When the two outcomes were combined, the WLW-derived HR was 1.64 (95% CI: 1.39, 1.93). Thus, MI survivors living in a deprived neighborhood are at higher risk of repeated hospital admissions due to ACS.