

Shrunken Pore Syndrome and Morbidity in the Malmö Diet and Cancer Cohort: A Generalized Propensity Score Approach

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Background

Shrunken pore syndrome (SPS) is defined by cystatin C-based estimation of glomerular filtration rate ($eGFR_{CYS}$) being less than 60% or 70% of creatinine-based GFR estimation ($eGFR_{CR}$) in the absence of extrarenal influences on cystatin C or creatinine. Shrunken pore syndrome (SPS) is associated with a high increase in mortality or morbidity in all investigated patient populations. However, few have investigated SPS in a healthy population. Therefore, the aim of this study was to investigate the association between SPS and morbidity and mortality in a cohort of healthy volunteers. A secondary aim of the study was to investigate sociodemographic and lifestyle risk factors that are associated with SPS.

Methods

We studied a subgroup of 5 061 individuals from the Malmö Diet and Cancer study (MDC), a population-based prospective cohort of healthy middle-aged volunteers, with a median follow-up of 25.3 years (IQR=5.7). The $eGFR_{CYS}/eGFR_{CR}$ -ratio at baseline was categorized in four groups (the lowest category indicating SPS) and used to estimate a generalized 4-level propensity score for SPS to adjust for confounding. We related the $eGFR_{CYS}/eGFR_{CR}$ -ratio to incident CVD, incident kidney disease, incident diabetes, incident cancer and all-cause mortality using Cox regression adjusted for the propensity score.

Results

Preliminary, mainly descriptive, results will be presented. The overall prevalence of SPS in the cohort was 8%. At baseline more individuals with SPS were unemployed (6.7%), lived alone (28.9%), and had a history of CVD (11.9%) in comparison to individuals with a $eGFR_{CYS}/eGFR_{CR}$ -ratio ≥ 1.00 where the corresponding figures were 3.4%, 20.8%, and 11.9%.

Figure 1. Balance of the generalized propensity score.

