EPIDEMIOLOGIC DETERMINANTS OF DYNAMICS IN HEART FAILURE PREVALENCE AND MORTALITY IN OLDER U.S. ADULTS

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Recent declines in heart failure (HF) prevalence and increases in mortality among older adults in the US suggest the need for research to investigate the relative contribution of the epidemiological determinants of these two processes to their historical and current trends. Study data were derived from a 5% sample of Medicare beneficiaries, 1991-2017. Partitioning analysis was used to decompose age-adjusted prevalence and incidence-based mortality (IBM) into their constituent components. HF prevalence trend decomposition demonstrated three phases: (a) Decelerated Increasing Prevalence (1994-2006) mainly driven by decreasing incidence, overpowering increasing survival, (b) Accelerated Declining Prevalence (2007-2014) and (c) Decelerated Declining Prevalence (2015-2017), mainly driven by declining incidence, overpowering declining survival. For HF IBM four phases were identified: (a) Decelerated Increasing Mortality (1994-2001) with declining incidence and increasing survival driving deceleration, (b) Accelerated Declining Mortality (2002-2012), (c) Decelerated Declining Mortality (2013-2016), mainly driven by declining incidence, overpowering declining survival, and (d) Accelerated Increasing Mortality (2017) mainly driven by declining survival, overpowering declining incidence. Study findings suggest that the recent decade-long decline in HF prevalence and 15-year decline in HF mortality mainly reflected decreasing incidence, while the most recent increase in mortality was due to declining survival, which may be associated with the Hospital Readmission Reduction Program. If current trends of incidence and survival persist, HF prevalence and mortality are forecasted to grow, suggesting that actions to reduce HF risk factors and improve treatment and management of HF after diagnosis are warranted.

PREDICTORS OF MULTIMORBIDITY AMONG KOREAN OLDER ADULTS: LONGITUDINAL SECONDARY DATA ANALYSIS

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Multimorbidity has become a global concern for an aging society. It has been reported to be associated with increased health service utilization, leading to poor health outcomes including quality of life. However, the incidence of multimorbidity and its related factors are poorly understood. The aim of this study was to determine the socioeconomic and health-related factors predicting the incidence of multimorbidity in Korean older adults using longitudinal secondary data from the Korean Longitudinal Study of Aging (KLoSA) dataset from 2008 to 2018. The KLoSA aimed to collect basic data to be used for developing socioeconomic policy for the aging society in Korea. The sample included 3,019 older adults aged 65 years and over who had 0-2 chronic diseases at baseline in 2008. Multimorbidity was measured with the incidence of co-existence of three or more chronic diseases using Cox's proportional-hazards model. Among 3,019 respondents (female 57.6%, mean age 73.07±6.30 years), 586 (19.4%) incidents of multimorbidity were reported after 10 years of follow-up. Low participation in social activities, being overweight or obesity, more depressive symptoms, current or past drinkers, and lower life satisfaction were identified as significant predictors of multimorbidity among Korean older adults. This study identified high risk groups with overlapping senility and multimorbidity, who require more attention from health care providers in the course of chronic disease monitoring and management. This longitudinal approach will contribute to the development of preventive strategies to reduce the incidence of multimorbidity among older adults.

SEX DIFFERENCE IN ALL-CAUSE AND INFECTION-SPECIFIC MORTALITY OVER 10 YEARS POST HIP FRACTURE

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Men die at a twice higher rate than women in the first two years after fracture and also experience higher infection-related mortality. Most research has only looked at differences in short-term mortality after hip fracture. The objective was to determine if cumulative incidence of all-cause mortality and infection-specific mortality is higher in men compared to women over ten years. Data came from Baltimore Hip Studies7th cohort. Women were frequency-matched (1:1) to men on timing of fracture to ensure equal numbers of men and women. The association of sex and all-cause mortality was analyzed using Cox proportional hazard model and a cause-specific hazard model for infection-specific mortality. Both models controlled for age, cognition, comorbidity, depressive symptoms, BMI, and pre-fracture ADL limitations. Complete-case sample size was 300 (men=145, women=155). By the end of ten years from the date of admission for a hip fracture, there were 237 (men=132, women=105) all-cause deaths and 38 (men=25, women=13) infection-specific deaths. Men had significantly higher all-cause mortality risk [73.7% vs 59.3%; HR=2.31(2.02-2.59)] and infection-specific mortality [17.2% vs 8.3%; HR=4.43(2.07-9.51)] compared to women. In addition to sex, older age, cognition, and comorbidities were associated with all-cause mortality whereas only BMI was associated with infection-specific mortality in adjusted models. Men had a higher risk of mortality over 10 years compared to women, specifically two-fold higher risk of infection-specific mortality compared to all-cause mortality. Findings imply that interventions to prevent/treat infection, tailored by sex, may be needed to narrow significant differences in long-term mortality rates between men and women.