SEX-BASED DISPARITIES IN HEART FAILURE WITH PRESERVED EJECTION FRACTION-RELATED HOSPITALIZATIONS AND SUBSEQUENT ALL-CAUSE MORTALITY AMONG LEUKEMIA SURVIVORS: A NATIONAL INPATIENT SAMPLE ANALYSIS, 2022

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Introduction

Heart failure with preserved ejection fraction (HFpEF) is an emerging concern among cancer survivors, including those with a history of leukemia, due to long-term cardiotoxic effects of cancer therapy

Objectives

To examine the burden of HFpEF among hospitalized leukemia survivors and its association with in-hospital mortality, with analyses stratified by sex and race.

Methods

Data were drawn from the 2022 National Inpatient Sample (NIS), a representative U.S. hospitalization database. Adult admissions with a history of leukemia were identified using ICD-10-CM codes, excluding active leukemia cases. HFpEF prevalence and outcomes were analyzed by sex and race. The primary outcome was in-hospital all-cause mortality. Categorical variables were compared using chi-square tests, and multivariable logistic regression estimated adjusted odds ratios (aORs) for mortality, adjusting for demographic and clinical covariates.

Results

Among 23,385 weighted hospitalizations for leukemia survivors, 2,425 cases (10.4%) had a documented history of HFpEF, representing a significantly higher prevalence compared to 7.2% in hospitalizations without a history of leukemia ($p < 0.001$). These patients were older (median age 79 vs. 70; $p < 0.001$), and predominantly White (82.8% vs. 78.4%) compared to those without HFpEF. Females represented a slightly higher proportion of the HFpEF group (49.1%).The prevalence in females rose from 7.4% to 11.3% and in males from 6.8% to 9.6% ($p < 0.001$). By race, prevalence rose from 8.4% to 11.1% in Whites and from 7.3% to 10.9% in both Blacks and Hispanics ($p < 0.001$). HFpEF was associated with reduced in-hospital mortality overall (aOR 0.95, 95% CI 0.93–0.97) and in males (aOR 0.90, 95% CI 0.88–0.92), but was linked to increased mortality in females (aOR 1.09, 95% CI 1.07–1.11), ($p < 0.001$).

Summary

HFpEF was more prevalent among older and White leukemia survivors and showed a sex-specific impact on outcomes. It was associated with improved survival in males highlighting the need for sex-stratified care.These findings underscore the importance of sex-stratified surveillance and management strategies and management strategies for cardiovascular disease in long-term cancer survivorship care.