

Clinical Characteristics and Echocardiographic Features of Black Men vs. Black Women with Systolic Heart Failure

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Purpose: We sought to determine whether significant differences exist in clinical characteristics and echocardiographic features between black men and black women who presented to an outpatient heart failure clinic.

Methods: A retrospective review of the charts of 114 consecutive patients with systolic dysfunction who presented to a heart failure clinic in Brooklyn from 1999–2003 was performed. The first echocardiogram within six months of presentation to the clinic was used for analysis. The clinical characteristics included are: age, sex, body mass index (BMI) and diabetes status. A significance level of <0.05 was used throughout.

Summary: Based on the analysis of 108 black men and women, overall, men have a significantly larger left ventricular end-diastolic diameter (LVEDD) compared to women ($p<0.006$). Younger men (7.17 cm) had a larger LVEDD compared to older men (6.37 cm) and both younger and older women (6.22 cm and 6.40 cm, respectively). This difference in LVEDD between the sexes decreased with aging. Men (22.17) had a lower ejection fraction (EF) than women (25.37). No significant differences were noted in the BMI (30.45 for men and 28.60 for women) and the albumin level (3.59 for men and 3.44 for women) between the sexes. However, the younger age group (particularly younger men) had a higher BMI than the older age group ($p=0.006$).

Key words: heart failure ■ left ventricular end-diastolic diameter ■ ejection fraction ■ body mass index ■ sexes ■ age

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INTRODUCTION

Heart failure (HF) is the leading cause of morbidity and mortality for almost five million Americans.¹ The disease affects all races. However, blacks (3%) have a higher prevalence of the disease than their white (2%) counterparts.² There is a 1.8-fold increase in mortality for black men and a 2.4-fold increase in mortality for black women,² as compared with other HF patients. Nationally, a disproportionately higher hospitalization rate is also noted.^{1,3} The reasons for this increased morbidity and mortality in blacks are largely unknown. This study was designed to retrospectively examine the clinical and echocardiographic characteristics of black men and black women with systolic HF. We sought to determine whether there are significant differences between black men and black women.

METHODS

Study Sample

The patient cohorts in this study were derived from the HF clinic of a university hospital in an urban setting. A retrospective review of the charts of 114 consecutive patients with systolic dysfunction who presented to the clinic from 1999–2003 was performed. One-hundred-eight patients are blacks, and their charts were reviewed for the purpose of this study.

Study Design

Characteristics, including sex, age, body mass index (BMI), left ventricular end-diastolic diameter (LVEDD), ejection fraction (EF), albumin levels, diabetic state (presence or absence) and creatinine level, were included in the statistical analysis. BMI was calculated using the patient's height and weight during their initial visit or from measurements closest to the initial visit. The echocardiographic features included in the study, LVEDD and EF, were based on the echocardiographic study done within six months of presentation to the clinic. The echocardiograms were read by

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