Format: Abstract

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Left ventricular hypertrophy is more prevalent in blacks than whites in the general population: the Dallas Heart Study.

Drazner MH[1], Dries DL, Peshock RM, Cooper RS, Klassen C, Kazi F, Willett D, Victor RG.

Author information

Abstract

Although recent studies have suggested that blacks compared with whites have an increased prevalence of left ventricular hypertrophy, it remains uncertain whether this is true despite adjustment for body composition (fat mass and fat-free mass) and when assessed by cardiac MRI in the general population. The Dallas Heart Study is a population-based study of Dallas County in which 1335 black and 858 white participants 30 to 67 years of age underwent detailed assessment including dual-energy x-ray absorptiometry scan to measure body composition and cardiac MRI. Left ventricular hypertrophy, whether defined by indexation to body surface area ($P<0.001$), fat-free mass ($P=0.002$), or height2.7 ($P<0.001$) was 2- to 3-fold more common in black versus white women. Similar results were seen when comparing black and white men ($P<0.001$ when left ventricular hypertrophy was indexed to body surface area or height2.7 and $P=0.05$ when indexed to fat-free mass). Ethnic disparities in left ventricular mass persisted in multivariable models despite adjustment for fat mass, fat-free mass, systolic blood pressure, age, gender, and measures of socioeconomic status. We conclude that blacks compared with whites have increased left ventricular mass and a 2- to 3-fold higher prevalence of left ventricular hypertrophy in the general population, as assessed by cardiac MRI. The ethnic differences in left ventricular mass are independent of differences in body composition.

Comment in

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