Racial Differences in Hypertrophic Cardiomyopathy

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BACKGROUND

Data on racial differences in clinical characteristics and outcomes in patients with hypertrophic cardiomyopathy (HCM) is limited. We aimed to analyze these differences at our HCM center.

METHODS

All adult patients with HCM seen at our HCM center from 2010 to 2021 were included in this study.

The primary objective was to evaluate racial differences in clinical characteristics, echocardiographic characteristics, and clinical outcomes between Blacks and Whites.

Propensity score matched analysis was used to evaluate odds of septal myectomy. Univariate and Multivariate logistic regression was used for other outcomes.

RESULTS

Of 438 patients with HCM, 351 (80%) were Whites and 87 (20%) were Blacks.

Racial differences in clinically and statistically significant baseline characteristics in patients with HCM are shown in Figure 1.

Pathogenic mutation was more frequent in Whites than in Blacks (24% vs 14%; P 0.03).

Left ventricular maximum wall thickness and ejection fraction were similar in Whites and Blacks (2 cm vs 1.9cm, P 0.06; 68% vs. 69%, P 0.24, respectively).

Septal myectomy was performed more frequently in Whites than in Blacks (16% vs 3%: P 0.001). On propensity score matched analysis, the odds of septal myectomy were 5.6 times higher in Whites than in Blacks (odds ratio 5.6; P 0.02).

All-cause mortality, heart failure hospitalization, ethanol ablation, and implantable cardioverter-defibrillator (ICD) placement were similar on both unadjusted and adjusted analysis.

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DISCUSSION

Pathogenic mutations were more frequent in Whites than in AA.

AA present at a younger age than in Whites.

Hypertension was more prevalent in Blacks, but the mean left ventricular maximum wall thickness was not different than in Whites.

White patients with HCM had worse echocardiographic characteristics than in Blacks and appropriately got more septal myectomy despite similar LV maximal wall thickness and lower prevalence of hypertension than in Blacks. However, GLS was significantly lower in Blacks than in Whites.

All-cause mortality, alcohol septal ablation, heart failure hospitalization, and ICD placement was similar in Whites and Blacks.

CONCLUSION

Our single-center experience suggests racial differences exist in demographic, clinical, and echocardiographic characteristics with lower odds of septal myectomy in Blacks than Whites. This needs to be substantiated with a large multicenter study.