

Letter to the Editor

Aortic stiffness in hypertrophic cardiomyopathy

Dear Editor,

We have read the article of Vizzardi et al, entitled "Elastic aortic properties in hypertrophic cardiomyopathy: a single center echocardiographic evaluation" with great interest¹. Authors evaluated echocardiographically-derived aortic dimensions and elastic properties in hypertrophic cardiomyopathy (HCM) patients, including tissue doppler imaging waves and tissue strain of ascending aorta, in comparison to healthy subjects. They reported that patients affected by HCM showed a larger aorta and impaired aortic elastic properties compared with healthy volunteers.

HCM is a genetic cardiac disease with high heterogeneity in clinic presentation and phenotype. It affects about 1 out of 500 adult subjects and it is recognized as the most common cause of sudden death in young people, especially in athletes¹. Aortic elastic properties (aortic stiffness, aortic strain, aortic distensibility etc.) are important determinants of left ventricular (LV) function by means of ventriculo-arterial coupling. They also influence coronary blood flow and are independent prognostic factors of cardiovascular risk¹.

In previous studies, it was found that aortic stiffness was higher in diabetic, hypertensive and end stage renal failure patients than in control group and was an independent prognostic factor². Furthermore, there was a statistically significant increase in arterial stiffness in smoker, diabetic, hypertensive and hyperlipidemic patients when compared with control group³.

When aforementioned studies are taken into account, the question whether the change in elastic properties in HCM patients arises from the genetic characteristics of the disease or from traditional cardiovascular risk factors, appears in minds. For this reason, we think that determining the traditional risk factors of both HCM and control group patients would make the study of Vizzardi et al more valuable.

Conflict of Interest

The Authors declare that they have no conflict of interests.

References

- 1) VIZZARDI E, SCIATTI E, BONAIDEI I, GELSOMINO S, LORUSSO R, METRA M. Elastic aortic properties in hypertrophic cardiomyopathy: a single center echocardiographic evaluation. *Eur Rev Med Pharmacol Sci* 2014;18: 3251-3255.
- 2) SETHI S, RIVERA O, OLIVEROS R, CHILTON R. AORTIC STIFFNESS: pathophysiology, clinical implications, and approach to treatment. *Integr Blood Press Control* 2014; 7: 29-34.
- 3) MCENIERY CM, YASMIN, McDONNELL B, MUNNERY M, WALLACE SM, ROWE CV, COCKCROFT JR, WILKINSON IB; Anglo-Cardiff Collaborative Trial Investigators. Central pressure: variability and impact of cardiovascular risk factors: the Anglo-Cardiff Collaborative Trial II. *Hypertension*. 2008; 51:1476-1482.

O. Uz¹, U. Kucuk¹, H. Ün¹, Z. Isilak¹, M. Aparci²

¹Department of Cardiology, Gulhane Military Medical Academy, Haydarpasa Training Hospital, Istanbul, Turkey

²Department of Cardiology, Air Force Academy Hospital, Istanbul, Turkey. halukerzurum@yahoo.com