Letter to the Editor

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## Arterial Stiffness May Be Associated with Mitral Annular Calcification Based on Inflammatory Condition

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Dear Editor,

We read the article 'Mitral Annular Calcification Is Associated with Pulse Wave Velocity but Not with Augmentation Index' with great interest [1]. The authors concluded that mitral annular calcification was significantly associated with increased arterial stiffness and that it was an independent determinant of aortic pulse wave velocity. We believe that these findings will be guides for further studies about the effect of inflammation on arterial stiffness parameters in patients with mitral annular calcification.

Mitral annular calcification is known as a chronic and degenerative calcification of the surrounding fibrous support of the mitral valve. This process is a frequent finding on echocardiographic examination and progresses with advanced age. Although the exact mechanism is not exactly known, mitral annular calcification seems to be related to cardiovascular risk factors and clinical atherosclerosis, thus giving additional evidence for the hypothesis that annular calcification is a form of vascular calcification. Vascular calcification occurs mainly in the arteries and can play a role in the etiology of atherosclerosis, which is the main cause of cardiovascular disease [2].

Arterial stiffness indicates the viscoelastic properties of the vessel wall. It represents vascular damage and is a measure of the degree of atherosclerosis [3]. Arterial stiffness has received increased attention due to its role as an independent prognostic factor for hypertension, chronic kidney disease, diabetes, and heart failure. Increased arterial stiffness is a common indicator of atherosclerotic involvement of the vascular structure indicating coronary artery disease, cerebrovascular disease and peripheral arterial disease [4]. It can also be affected by atherosclerotic risk factors such as smoking, alcohol consumption, hypercholesterolemia, hypothyroidism and older age [5]. Furthermore, some medications such as antihypertensive treatment including angiotensin-converting enzyme inhibitors, angiotensin receptor blocker, and statins used may influence arterial stiffness parameters [6]. However, the authors of the present study [1] did not mention either some other factors affecting arterial stiffness, including alcohol consumption, hypothyroidism, heart failure, cerebrovascular disease and peripheral arterial disease. Equally important is the fact that evaluating arterial stiffness is a noninvasive method to assess endothelial dysfunction in clinical practice and that without other inflammatory markers, arterial stiffness alone may not provide information to clinicians about endothelial inflammation [7]. It would have been better, if these factors had been included in the paper.

Editor's Note: The authors of 'Mitral Annular Calcification Is Associated with Pulse Wave Velocity but Not with Augmentation Index' were invited to respond to this letter but they decided not to do so.

*References*

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