Arterial stiffness evaluation in patients with irritable bowel syndrome: Role of antihypertensive drugs and statins

To the Editor,

We are very pleased to read with great interest to the article by Durakoğlugil et al (1). They investigated heart rate variability, carotid intima-media thickness, and carotid-femoral pulse wave velocity (cf-PWV) as a measure of arterial stiffness in patients with irritable bowel syndrome in the recent study titled "The effect of irritable bowel syndrome on carotid intima-media thickness, pulse wave velocity and heart rate variability" and published in Anatol J Cardiol 2014; 14: 525-30 (1). They found that cf-PWV values were similar between patients with irritable bowel syndrome and controls. This is a well-written study. However, I want to pay attention to the antihypertensive drugs used by patients that can affect arterial stiffness.

Arterial stiffness is a complex process associated with confounding factors. Cecelja et al. (2) published a systematic review that showed that the contribution of cardiovascular risk factors other than age and blood pressure to aortic stiffness measured by cf-PWV is small or insignificant, and that age and blood pressure consistently showed an independent association with aortic stiffness. It has also been shown that some antihypertensive drugs such as angiotensinconverting enzyme inhibitors, calcium channel blockers, and spiranolactone reduce arterial stiffness (3-5). In addition to angiotensinconverting enzyme inhibitors, β -blockers and aliskiren as direct renin inhibitors reduce arterial stiffness (5). Recent meta-analysis showed that angiotensin receptor blocker treatment also improves arterial stiffness (6).

In the study by Durakoğlugil et al. (1), there is no information regarding the antihypertensive drugs used. Similarly, statins also reduce arterial stiffness, but there is also no data regarding their use. From this aspect, antihypertensive drugs and statins should be considered in aortic stiffness evaluation. It would be helpful if the authors provided this information.

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References

- Durakoğlugil ME, Çanga A, Kocaman SA, Akdoğan RA, Durakoğlugil T, Ergül E, et al. The effect of irritable bowel syndrome on carotid intimamedia thickness, pulse wave velocity and heart rate variability. Anatol J Cardiol 2014; 14: 525-30. [CrossRef]
- Cecelja M, Chowienczyk P. Dissociation of aortic pulse wave velocity with risk factors for cardiovascular disease other than hypertension: a systematic review. Hypertension 2009; 54: 1328-36. [CrossRef]
- Cavalcante JL, Lima JA, Redheuil A, Al-Mallah MH. Aortic stiffness: current understanding and future directions. J Am Coll Cardiol 2011; 57: 1511-22. [CrossRef]
- Dudenbostel T, Glasser SP. Effects of antihypertensive drugs on arterial stiffness. Cardiol Rev 2012; 20: 259-63. [CrossRef]
- Koumaras C, Tziomalos K, Stavrinou E, Katsiki N, Athyros VG, Mikhailidis DP, et al. Effects of renin-angiotensin-aldosterone system inhibitors and beta-blockers on markers of arterial stiffness. J Am Soc Hypertens 2014; 8: 74-82. [CrossRef]
- 6. Peng F, Pan H, Wang B, Lin J, Niu W. The impact of angiotensin receptor blockers on arterial stiffness: a meta-analysis. Hypertens Res 2015. Epub ahead of print. [CrossRef]

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