European **Rev**iew for **Med**ical and **Pharmacol**ogical **Sci**ences 2016; 20: 201

Letter to the Editor

Autonomic nervous system and hypertension

Dear Editor,

We read the article ''Heart rate turbulence in masked hypertension and white-coat hypertension.'' by Song et al[1] with interest. The authors have concluded that Heart Rate Turbulence (HRT) parameters in Masked hypertension (MH), White-coat hypertension, Essential Hypertension (EH) patients were significantly lower compared with Normotensive (NT) patients.

We know that, in addition to heart rate turbulence, Deceleration Capacity (DC) is mediated by the autonomic nervous system and serve as marker of autonomic tonic activity as in HRT[2-5]. Furthermore, data from the Framingham cohort and a subset of the Atherosclerosis Risk in Communities (ARIC) cohort suggest that individuals with decreased Heart Rate Variability (HRV), that is as a marker of autonomic nervous system, have an increased risk of developing hypertension, although results are inconsistent across measures of HRV and gender[6,7].

So, I think that, if patients with MH, WCH, EH and NT were assessed with HRV and DC in addition to HRT parameters, this study might completely reflect autonomic function in these population.

Conflict of Interest

The Authors declare that they have no conflict of interests.

References

1) Song CL, Zhang X, Liu YK, Yue WW, Wu H. Heart rate turbulence in masked hypertension and white-coat hypertension. Eur Rev Med Pharmacol Sci 2015; 19: 1457-1460.
2) Schmidt G, Malik M, Barthel P, Schneider R, Ulm K, Rolnitzky L, Camm AJ, Bigger JT Jr, Schömig A. Heart-rate turbulence after ventricular premature beats as a predictor of mortality after acute myocardial infarction. Lancet 1999; 353: 1390-1396.
3) Bauer A, Malik M, Schmidt G, Barthel P, Bonnemeier H, Cygankiewicz I, Guzik P, Lombardi F, Müller A, Oto A, Schneider R, Watanabe M, Wichterle D, Zareba W. Heart rate turbulence: standards of measurement, physiological interpretation and clinical use: International Society for Holter and Noninvasive Electrophysiology Consensus. J Am Coll Cardiol 2008; 52: 1353-1365.
4) Bauer A, Kantelhardt JW, Barthel P, Schneider R, Mäkikallio T, Ulm K, Hnatkova K, Schömig A, Huikuri H, Bunde A, Malik M, Schmidt G. Deceleration capacity of heart rate as a predictor of mortality after myocardial infarction: cohort study. Lancet 2006; 367: 1674-1681.
5) Bauer A, Barthel P, Müller A, Ulm K, Huikuri H, Malik M, Schmidt G. Risk prediction by heart rate turbulence and deceleration capacity in postinfarction patients with preserved left ventricular function retrospective analysis of 4 independent trials. J Electrocardiol 2009; 42: 597-601.
6) Liao D, Cai J, Barnes RW, Tyroler HA, Rautaharju P, Holme I, Heiss G. Association of cardiac autonomic function and the development of hypertension: the ARIC Study. Am J Hypertens 1996; 9: 1147-1156.
7) Singh JP, Larson MG, Tsuji H, Evans JC, O'Donnell CJ, Levy D. Reduced heart rate variability and new-onset hypertension. Insights into pathogenesis of hypertension: the Framingham Heart Study. Hypertension 1998; 32: 293-297.

S. Iscen
Cardiology, Diyarbakir Military Hospital, Diyarbakir, Turkey

Corresponding Author: Sinan Iscen, MD; e-mail: dr.iscen@hotmail.com