

Letter to the Editor

Editöre Mektup

Heart rate turbulence in patients with stable coronary artery disease and its relationship with the severity of the disease

Dear Editor,

The article written by Baydar et al. on heart rate turbulence (HRT) in patients with stable coronary artery disease (CAD) and its relationship to the severity of the disease is very interesting.^[1] Baydar et al. found that, “HRT variables are impaired in patients with stable CAD and these variables also correlate with severity of CAD.”^[1] HRT is associated with autonomic function, and cardiac autonomic dysfunction has strong relationship to prognosis of coronary heart disease, heart failure, and chronic obstructive pulmonary disease. Some diseases can cause autonomic dysfunction, and some pharmacological agents can affect autonomic function of the heart.^[2] In the methodology part of the article, the author noted some diseases known to impair the autonomic nervous system, but only pointed to diabetes mellitus and hypertension. However, renal and liver diseases; porphyria; amyloidosis; any neurological diseases, including polyneuropathy, multiple sclerosis, and Guillain-Barre syndrome; pregnancy; anemia; and thyroid disorders can also interfere with autonomic nervous system. Patients with these diseases must be excluded in such a study. Patients taking drugs that interfere with the autonomic nervous system, including vasodilators, sedatives, antidepressants, antiepileptic and hypnotic drugs, antihistamines, antiarrhythmics, acetylsalicylic acid, and diuretics must also be excluded. Chronotropic incompetence and heart rate variability should also be added to evaluate the autonomic functions of the heart. Heart rate variability can be obtained from

Holter monitoring. Another missing part of the study is evaluation of the severity of CAD. Gensini score is suitable for this evaluation, but SYNTAX score should be added, as suggested in recent guidelines. The guidelines also suggest that Syntax score must be used to make a decision on revascularization.^[3]

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Authors' reply

Dear Editor,

First of all, I would like to thank the readers for the thought and importance given to our work, as well as their constructive criticism.^[1] As the readers said,

heart rate turbulence (HRT) is associated with autonomic function and some diseases and pharmacological agents can affect autonomic function of the heart.^[2] In our study we excluded all patients with diseases known to impair the autonomic nervous system (diabetes mellitus; hypertension; renal and liver diseases;

porphyria; amyloidosis; any neurological diseases, including polyneuropathy, multiple sclerosis, and Guillain-Barre syndrome; pregnancy; anemia; and thyroid disorders, etc.), and those who were receiving treatment with antiarrhythmic agents, sedatives, antidepressants, antiepileptic and hypnotic drugs, antihistamines, and anti-arrhythmics. Only the use of acetylsalicylic acid was found to be significantly higher in patients with coronary artery disease (CAD). In our original study, we obtained heart rate variability^[3] that variables are impaired in patients with stable CAD and correlated with severity of CAD. SDNN, SDNN index, and normalized low-frequency power (LFnu) values were found to be significantly decreased in CAD group (SDNN: 116.3±36.3 ms vs 131.8±39.7 ms, p=0.010; SDNN index: 44.8±15 ms vs 51±16.7 ms, p=0.013; LFnu: 65.9±20.2 vs 71.6±14.6, p=0.041 in patients with CAD and control group, respectively). Furthermore, negative correlation between SDNN and SDNN index, SDANN index, pNN50, RMSSD, and Gensini score^[4] were found (r= -0.356, p<0.001; r=-0.270, p=0.001; r=-0.309, p<0.001; r=-0.192, p=0.014; r=-0.220, p=0.005, respectively) But these values were removed from the article by the referee before publication. We did not use SYNTAX score evaluation of severity and extent of CAD because SYNTAX score is suitable for comparing percutaneous coronary intervention and cardiac surgery in patients with high-risk left main and/or 3-vessel disease.^[5] In our study group, only 11 of the patients had 3-vessel disease.

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