



LETTER TO THE EDITOR

Body mass index may be an influential factor in heart rate variability



Índice da massa corporal poderá ser um fator influente na variabilidade da frequência cardíaca

To the Editor,

We thank Gomez et al. for their study¹ entitled "Cardiovascular profile in myotonic dystrophy type 1: Analysis of a case series in a specialized center" published in the December 2014 issue of the *Journal*. They aimed to determine total cardiovascular risk and the risk of arrhythmias in patients with myotonic dystrophy type 1 (DM-1) and to compare these findings with the genetic results of patients in terms of CTG repeats. They concluded that altered heart rate variability (HRV) parameters, especially in the frequency domain (LF, HF and LF/HF ratio) in the study population and lower LF/HF ratio in females compared with males, indicated higher vagal tone in females.

HRV is a well-established and valuable method for evaluation of cardiac autonomic function which has prognostic importance in various diseases.^{2,3} HRV, which can be defined as beat-to-beat RR interval variability, provides numerical data for further analysis.⁴ Nevertheless, HRV measurements may be affected by diverse factors including age, gender, ethnicity, nutrition, medication, blood pressure, hyperlipidemia, diabetes mellitus, hypothyroidism, heart failure, coronary artery disease, chronic obstructive pulmonary disease, renal failure and chronic liver disease.²⁻⁶ It is clear that HRV is affected by gender.³ Hillebrand et al.⁶ found a relationship between body fat and HRV, probably resulting from insulin resistance. In Gomez's study, it is not surprising that a lower LF/HF ratio was found in women than in

men, reflecting greater vagal activity in females, and mean body mass index was lower in men than in women ($p < 0.05$). Blood lipid levels, blood pressure and insulin resistance in the study population were not mentioned in the article. We believe that the results of this study would be more reliable with these additional data and might be more valuable for demonstration of autonomic dysfunction in patients with DM-1 with and without ≤ 900 CTG repeats.

References

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