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Dear Editor,

We read the article "The effect of Ramadan fasting on circadian variation of Turkish patients with acute myocardial infarction" written by Turker *et al.* with interest [1]. The authors [1] aimed to evaluate the effect of Ramadan fasting on circadian variation of acute ST-elevation myocardial infarction (STEMI) in Turkish patients. We believe that these findings will act as a guide for further studies that will assess circadian variation of patients with STEMI.

Rapid restoration of the blood flow in the coronary artery occluded by thrombus is a cornerstone of treatment in patients with STEMI [2]. The circadian clock influences a number of cardiovascular (patho)physiological processes including the incidence of acute myocardial infarction. It is well established that the circadian rhythm influences cardiovascular system physiology, inducing diurnal variations of blood pressure, heart rate, cardiac output and endothelial function among other physiological parameters. Different circadian periodicity in the time of onset of STEMI was found regarding infarction site. This may be related to genetic and demographic characteristics of the Turkish population.

The circadian periodicity may influence the cardiovascular system physiology including the blood pressure, heart rate, cardiac output and endothelial function in fasting patients with STEMI [3]. So, we think that if these features of patients are measured at the same time, there may be different results in this study. A second challenge is that further studies are needed to define the role of Ramadan fasting to affect the circadian clock.

Finally, the time of onset of STEMI may be related to different circadian periodicity. Therefore, it might be useful if the authors provided information about their patients' time of onset of STEMI.

References

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Dear Editor,

We thank our colleagues for their interest in our investigation [1]. Different circadian periodicity in the time of onset of ST-elevation myocardial infarction (STEMI) has been raised as a potential confounder of our results. They advised simultaneous measurement of physiological variables including blood pressure, heart rate, cardiac output and endothelial function in fasting patients. Blood pressure and heart rate were not statistically different between fasting and non-fasting patients (it was stated in Table 1 in the manuscript). On the other hand, it is clear that measuring endothelial dysfunction and cardiac output was beyond the aim of the paper. However, we have further analyzed the infarct site of fasting patients according to the onset of MI and found no difference (the numbers of patients with anterior vs inferior were 2/3 in 0-6 h, 4/6 in 6-12 h, 20/16 in 12-18 h and 2/2 in 18-24 h, respectively ($p = 0.795$)). Similarly, there was no difference between the infarct site and the onset of MI (the numbers of patients with anterior vs inferior were 3/3 in 0-6 h, 20/16 in 6-12 h, 6/18 in 12-18 h and 13/17 in 18-24 h, respectively ($p = 0.135$)) in non-fasting patients. Our colleagues' other suggestion regarding further studies may be helpful to define the role of Ramadan fasting to affect the circadian clock. Finally, we provided information about our patients' time of onset of STEMI in Figure 1.

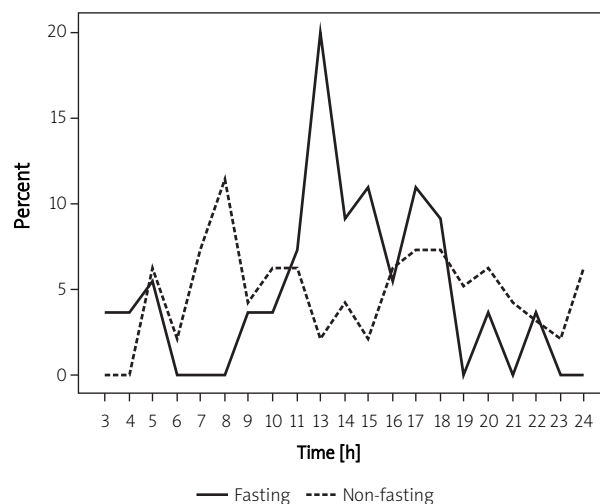


Fig. 1. Time of onset of STEMI in fasting and non-fasting patients

Ryc. 1. Czas wystąpienia STEMI u pacjentów na czczo i niebędących na czczo

References

1. Turker Y, Aydin M, Aslantas Y, et al. The effect of Ramadan fasting on circadian variation of Turkish patients with acute myocardial infarction. *Postep Kardiol Inter* 2012; 3: 193-198.

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