

Polycystic ovary syndrome and arrhythmic risk: the role of comorbidities and the prevalence of interatrial block

To the Editor,

We have read with great interest the article by Bayır PT et al. (1) entitled "Assessment of atrial electromechanical interval and P wave dispersion in patients with polycystic ovary syndrome" recently published in *Anatol J Cardiol* 2016; 16: 100-5. The authors, investigating several echocardiographic (atrial electromechanical delay) and electrocardiographic parameters (P wave duration and dispersion) predictive of atrial fibrillation, showed an increased interatrial and intra-atrial conduction times in patients affected by polycystic ovary syndrome (PCOS) compared to healthy women group without clinical and laboratory features of PCOS. As the authors underline, the PCOS study population showed increased left atrium diameters and impaired diastolic function parameters; these findings support the hypothesis that increased atrial conduction times might not be related per se to PCOS but might be a consequence of relatively impaired left ventricular diastolic function and atrial enlargement. According to our opinion, this is a point of pivotal importance, because it may affect the arrhythmologic management of patients with PCOS and, in particular, the timing of careful monitoring for early detection of atrial fibrillation. We suggest the authors to perform their electrocardiographic and echocardiographic analyses in PCOS patients with no structural or functional echocardiographic abnormalities, including the atrial mechanical function evaluation, and to correlate their results to the serum testosterone and estradiol levels (2). Furthermore, it should be noted that in other clinical scenarios, P-wave parameters, other than P-wave dispersion, are risk predictors of supraventricular arrhythmias and notably of stroke (3–5). Specifically, we refer to P-wave duration—the hallmark of interatrial block (IAB)—that Bayır PT et al. (1) measured but not discussed, thereby losing the opportunity to first report the prevalence of IAB in a PCOS population. Moreover, by analyzing the P-wave morphology in inferior leads, they could identify the advanced form of IAB, characterized by biphasic (+/–) P wave in leads II, III, and aVF, which is a stronger electrocardiographic predictor of atrial fibrillation and embolic stroke than P wave duration.

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Author's Reply

To the Editor,

We would like to thank the authors for their invaluable contributions to our article entitled 'Assessment of atrial electromechanical interval and P wave dispersion in patients with polycystic ovary syndrome' published in *Anatol J Cardiol* 2016; 16: 100-5 (1). In this article, we aimed to evaluate atrial electromechanical intervals and electrocardiographic P-wave indices related to increased atrial fibrillation risk in patients with polycystic ovary syndrome.

Polycystic ovary syndrome is the constellation of several clinical alterations sharing many similarities with metabolic syndrome. Since polycystic ovary syndrome is not solely a cardiac arrhythmia syndrome, polycystic ovary syndrome is not 'per se' related with the increased atrial conduction times. As in the case of metabolic syndrome, accompanying low-grade inflammation and hormonal and metabolic abnormalities are responsible for the increase in the cardiovascular risk of the patients with polycystic ovary syndrome. We speculated that the possible mechanisms operating on the atrial electromechanical intervals and P-wave indices are subtle alterations in diastolic functions, low-grade inflammation, and sex hormone levels. Additionally, alterations in the atrial geometry may also cause atrial electrical abnormalities in polycystic ovary syndrome. On the other hand, these fine alterations do not always mean clinical abnormalities. In our study, which enrolled newly diagnosed polycystic ovary syndrome patients, both polycys-