

Letter to the Editor

Electrocardiographic indexes of arrhythmic risk in polycystic ovary syndrome

Dear Editor,

Akdag et al¹ by investigating several P-wave parameters and the QT interval have recently showed an increased P wave dispersion (PD) and QT dispersion (QTd) in patients affected by polycystic ovary syndrome (PCOS). As acknowledged by the Authors, this population exhibits a high prevalence of cardiac and stroke events and interestingly it shows many risk factors in common with atrial fibrillation. However, 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 stroke²⁻⁴. Specifically, we refer to P-wave duration – the hallmark of interatrial block (IAB)^{5,6} – that Akdag et al measured but not discussed, losing the opportunity to firstly report the prevalence of IAB in this population with high risk of atrial arrhythmias. Moreover, by analyzing the P-wave morphology in inferior leads, they could identify the advanced form of IAB, which is a stronger electrocardiographic predictor of atrial fibrillation and embolic stroke than P-wave duration⁶. Furthermore, we suggest to the Authors to complete the electrocardiographic analysis in their PCOS population analyzing the JT dispersion (JTd) and the T peak-end interval dispersion (TDR), that reflect the regional and transmural ventricular repolarization heterogeneity better than QT dispersion and may be clinically useful in assessing sudden cardiac death risk, as we showed in other clinical conditions⁷⁻¹⁰. Of outstanding interest might be the correlation between serum testosterone and estradiol levels and P-wave duration, JT and T peak-end dispersion so adding strength to Akdag's findings.

Conflict of Interest

The Authors declare that they have no conflict of interests.

References

- 1) AKDAG S, CIM N, YILDIZHAN R, AKYOL A, OZTURK F, BABAT N. Two markers in predicting the cardiovascular events in patients with polycystic ovary syndrome: increased P-wave and QT dispersion. *Eur Rev Med Pharmacol Sci* 2015; 19: 3508-3514.
- 2) RUSSO V, DI MEO F, RAGO A, PAPA AA, MOLINO A, MOSELLA M, POLITANO L, RUSSO MG, NIGRO G. Paroxysmal atrial fibrillation in myotonic dystrophy type 1 patients: P wave duration and dispersion analysis. *Eur Rev Med Pharmacol Sci* 2015; 19: 1241-1248.
- 3) MARANO M, D'AMATO A, BAYÉS DE LUNA A, BARANCHUK A. Hemodialysis affects interatrial conduction. *Ann Noninvasive Electrocardiol* 2015; 20: 299-300.
- 4) CONDE D, SEOANE L, GYSEL M, MITRIONE S, BAYÉS DE LUNA A, BARANCHUK A. Bayés' syndrome: the association between interatrial block and supraventricular arrhythmias. *Expert Rev Cardiovasc Ther* 2015; 13: 541-550.
- 5) MARANO M. Electrocardiographic criteria for interatrial block. *Int Urol Nephrol* 2013; 45: 1825.
- 6) BAYÉS DE LUNA A, PLATONOV P, COSIO FG, CYGANKIEWICZ I, PASTORE C, BARANOWSKI R, BAYÉS-GENIS A, GUINDO J, VIÑOLAS X, GARCIA-NIEBLA J, BARBOSA R, STERN S, SPODICK D. Interatrial blocks. A separate entity from left atrial enlargement. *J Electrocardiol* 2012; 45: 445-451.

- 7) RUSSO V, RAGO A, POLITANO L, PAPA AA, DI MEO F, RUSSO MG, GOLINO P, CALABRÒ R, NIGRO G. Increased dispersion of ventricular repolarization in Emery-Dreifuss muscular dystrophy patients. *Med Sci Monit* 2012; 18: CR643-647.
- 8) NIGRO G, RUSSO V, DI SALVO G, DE CRESCENZO I, RAGO A, PERRONE L, GOLINO P, RUSSO MG, CALABRÒ R. Increased heterogeneity of ventricular repolarization in obese nonhypertensive children. *Pacing Clin Electrophysiol* 2010; 33: 1533-1539.
- 9) NIGRO G, RUSSO V, RAGO A, PAPA AA, CARBONI N, MARCHEL M, PALLADINO A, HAUSMANOWA-PETRUSEWICZ I, RUSSO MG, POLITANO L. Regional and transmural dispersion of repolarisation in patients with Emery-Dreifuss muscular dystrophy. *Kardiol Pol* 2012; 70: 1154-1159.
- 10) RUSSO V, RAGO A, PANNONE B, PAPA AA, DI MEO F, MAYER MC, SPASIANO A, RUSSO MG, GOLINO P, CALABRÒ R, NIGRO G. Dispersion of repolarization and beta thalassemia major: the prognostic role of QT and JT dispersion for identifying the high risk patients for sudden death. *Eur J Haematol* 2011; 86: 324-331.

V. Russo¹, M. Marano²

¹Chair of Cardiology, Second University of Naples – Monaldi Hospital, Naples, Italy

²Hemodialysis Unit, Maria Rosaria Clinic, Pompei, Naples, Italy