

Letter to the Editor

Letter to the editor on article “Atrial septal defect patients with greater shunts show susceptibility for ventricular arrhythmias”

Dear Editor,

We read with interest the original research article concerning the arrhythmogenesis susceptibility in patients with atrial septal defect (ASD) by Yontar O.C. in current edition of Heart, Vessels and Transplantation journal (1). The study supplied valuable and novel information on relationship of shunt ratio (Q_p/Q_s) with ventricular arrhythmic predisposition in patients with ASD. To date, $T_{peak-Tend}$ and its ratio to corrected QT interval ($(T_{p-Te})/QT_c$) have to be proven as reliable markers of repolarization in various cardiovascular conditions, thus substantially replaced the classical repolarization markers, such as QT, QT_c (2, 3).

The first question appeared regarding to study design, though authors did not mention about age specificity. The mean ages were given as 40.5 (12.5) and 38.9 (12.7) years by groups. Were there solely adult patients or any pediatric or adolescent subjects (≤ 18 years) in this study population? Because pediatric and adult CHD patients significantly differ, that is why they must be evaluated separately (4, 5).

Actually, ASD is characterized by mostly atrial and supraventricular tachycardias. Closure of defect significantly decreases the prevalence of arrhythmias. Ventricular tachycardia is mostly observed in patients with ventricular septal defects and other complex congenital heart disease forms (6, 7). Despite the implementation of aforementioned repolarization indices in other cardiac conditions (coronary artery disease, valvular heart diseases, cardiomyopathies), currently there is no evidence on these parameters in congenital heart diseases (2). In order to confirm usefulness of T_{p-e} , T_{p-e}/QT_d , study had to include

ventricular arrhythmic events for a given timeline, preferably before and after correction.

Authors concluded that, the repolarization indices are indicative of sinus node autonomic dysfunction. However, they should provide the basis for that statement with objective parameters, such as heart rhythm variability indices. A 24-hour Holter monitoring precisely assists in the defining of autonomic parameters in patients with ventricular arrhythmias (8).

Authors also hypothesized the association of fibrosis with hemodynamic abnormalities in right heart chambers of this particular population. A surrogate marker of systolic function of right ventricle, namely the TAPSE (tricuspid annular systolic excursion) was significantly decreased in high shunt ratio group and clearly supports their hypothesis. Per se, the assessment of right heart diastolic function is recommended in patients with known/suspected right heart dysfunction according to ASE guidelines (9). If the right heart diastolic function was evaluated it would be worsened in ASD patients with high Q_p/Q_s , additionally supporting the fibrosis hypothesis of authors.

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Peterhof, Finnish Bay, Baltic Sea, Summer 2018. Elima Kudaiberdieva, Bishkek, Kyrgyzstan