Abstract: P954

12 lead Holter monitoring in Brugada syndrome

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Background. 12 lead-Holter monitoring is commonly used for the assessment of type 1 Brugada repolarization's burden. However, data considering the prevalence and morphology of premature ventricular contractions (PVC) in these patients is lacking.

Purpose. We investigated the prevalence of PVCs in subjects with Brugada syndrome (BRs) phenotype during 24-hour 12 lead-Holter monitoring (12-L Holter), trying to identify their origin according to morphology.

Methods. From January 2013 to September 2018, a total of 156 patients with type 1 BRs phenotype (spontaneous or drug induced) were screened for PVCs. In these patients we placed the right precordial leads at the second (V1-V2) and the forth (V3-V4) intercostal spaces.

Results. 83 subjects (53%) displayed PVCs. Their mean age was 50 years (range 21-73) and 63 (76%) were male. 14 subjects (17%) had a spontaneous type 1 repolarization whereas 69 (83%) presented a drug induced type 1. One patient had implanted an ICD as secondary prevention after an aborted sudden cardiac death. The others were mostly asymptomatic as only five of them (6%) had history of suspected cardiac syncope. 17 subjects (20%) had performed an electrophysiological study, which resulted positive in 3 cases (4%). The population without PVCs had similar baseline characteristics.

In 59 (71%) patients PVCs were monomorphic, in the other 29% we analyzed the prevalent morphology. PVCs were classified according to their morphology as follows: (i) left bundle branch block (LBBB)/inferior axis suggesting an origin from the right ventricular outflow tract (RVOT), that was shown in 40 (48%) subjects; (ii) right bundle branch block (RBBB)/left axis suggesting an origin close to the posterior fascicle of the left bundle branch in 36 (43%). The other 7 patients presented several morphologies.

According to their number during the 24-hour monitoring, PVCs were arbitrarily classified as follows: (i) 1-59, present in 62 patients (75%); (ii) 60-749, present in 16 patients (19%); (iii) 750-9000, present in 4 patients (5%); (iv) >9000, in only one patient (1%).

Conclusions. In our population of subjects with BRs phenotype the prevalence of PCVs is similar to that of the general population. Their morphologies suggest an origin from the RVOT or close to the posterior fascicle of the left bundle branch.