had paroxysmal AF. The left atrial longitudinal diameter ranged from 32 mm to 54 mm with mean LAD 43.18 mm (± 4.37 SD). Adenosine was given to 30 patients (60%) of the study group. Reconnection occurred in 20 patients (40%). Most common site of reablation after administration of adenosine was LSPV in 40% of patients, and mean time of reconnection was 2.75min (±2.86 SD).

**Conclusion:** Adenosine testing to identify and target dormant pulmonary vein conduction during catheter ablation of atrial fibrillation is a safe and highly effective strategy to improve the acute, intermediate success rate and improve symptoms in recurrent patients.

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**Complex ventricular premature beats detected by Holter monitoring as a predictor of sudden cardiac death in patients with cardiomyopathy**

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**Background:** Ventricular ectopic activity (PVCs) is among the most common forms of arrhythmia encountered in clinical practice. PVCs may have a benign course in structurally normal hearts. In cardiomyopathic patients, aggressive forms of PVCs may carry a high risk for developing lethal ventricular arrhythmias.

**Objective:** The aim of our study was to evaluate the utility of ventricular premature burden (VPB) detected by Holter monitoring in patients with dilated cardiomyopathy (DCM) and ischemic cardiomyopathy (ICM) for short term risk assessment of lethal ventricular arrhythmias.

**Methods:** The study included 120 patients [60 patients with dilated cardiomyopathy (DCM group) and 60 patients with ischemic cardiomyopathy (ICM group)]. DCM group included 30 patients who did not receive any cardiac implanted electronic devices (CIEDs) while the other 30 patients received CIEDs (22 CRT-P, 8 CRT-D). Regarding ICM group, 30 patients did not receive any CIEDs while the other 30 patients received CIEDs (18 CRT-P, 12 ICDs). All patients underwent clinical evaluation (NYHA class), EF by echocardiography and 24 hours Holter monitoring for PVCs evaluation using Lown’s grade. All patients were requested to do a simple electrocardiographic and Holter monitoring findings in both DCM & ICM groups. In DCM group, PVCs/24 hours (median: 2348 in group A vs. 262 in group B; p: 0.006), couplets no./24 hours (median: 115 in group A vs. 0 in group B; p: <0.001), VT runs/24 hr (median: 121 in group A vs. 0 in group B; p: <0.001). While in ICM group, PVCs/24 hours (median: 20358 in group A vs. 940 in group B; p: < 0.0001), couplets/no.24 hours (median: 184 in group A vs. 15 in group B; p: 0.0175), VT runs/24 hr (median : 67 in group A vs. 0 in group B; p: 0.0008).

**Conclusion:** Significant diagnostic information could be derived from 24 hours Holter monitoring in patients with cardiomyopathy. PVCs number /24 hours Holter is an independent risk factor for mortality and ventricular arrhythmias. Lown’s grading of PVCs is a useful tool for risk stratification of SCD in patients with dilated and ischemic cardiomyopathy.

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**Correlation between qrs duration and cardiac output measured by left ventricular outflow tract velocity in patient with cardiac resynchronization therapy**

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**Background:** Cardiac resynchronization therapy (CRT) is proved as an effective treatment for moderate to severe heart failure. It reduces all-cause mortality in patients with advanced heart failure. There is strong evidence that CRT reduces mortality and hospitalization, improves cardiac function and structure in symptomatic chronic heart failure patients with optimal medical treatment, severely depressed LVEF (i.e. ≤35%) and complete LBBB. However 30% of patients may show negative response to CRT therapy. Therefore, optimization of CRT therapy in patients with heart failure seems to a be main subject for study in our researches. Methods of optimization includes optimization of medical therapy, control of risk factors and co-morbidities, and optimization of device implantation and programming. Overall, studying the correlation between QRS duration and cardiac output will improve CRT programming optimization techniques.

**Aim:** To study the correlation between QRS duration and cardiac output measured by left ventricular outflow tract velocity (LVOT VTI) in patients with CRT implantation.

**Methods:** Study included 100 CRT already implanted patients, they are requested to do a simple electrocardiographic and echocardiography study. The relation between QRS and cardiac output are studied among the patients.

**Results:** On 100 patients there were 19 patients with chronic HF, 29 patients with ischemic cardiomyopathy, 48 with dilated type and 4 with undefined etiology. We correlate the qrs duration and cardiac output in two ways, one way is through dividing patients into three groups according to their qrs and we found a significant inverse correlation by this way (P-value 0.04), the other way is called Pearson correlation coefficient but the correlation with this way was insignificant (P = 0.88). We also tried to define optimal cut off values for optimal response to CRT using ROC curves and it was significant with LVOT VTI & diameter.

**Conclusion:** Cardiac output is showing inverse correlation with qrs duration in one way of statistic analysis, but the dependence on qrs for optimization of CRT still not clear as by studying the ROCs we found that the most significant predictor of outcome was the LVOT VTI.