**ROLE OF GLOBAL 2D STRAIN IN PREDICTION OF VENTRICULAR ARRYTHMIA IN PATIENTS WITH INTRACARDIAC DEFIBRILATOR**

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Introduction: Left ventricular ejection fraction (LVEF) remains the most important marker for risk stratification of ICD implantation. Assessment of 2D strain using speckle-tracking is a relatively new, angle-independent technique for evaluation of myocardial function.

Objective: We aimed to evaluate the correlation of echocardiographic assessment of global longitudinal 2D strain (GLS) and ventricular arrhythmia in patients with ICD implantation.

Method and Material: 55 consecutive patients (mean age 54 years, 16% female) with ICD and history of coronary heart disease (CHD) or dilated Cardiomyopathy (DCM) were included. Systolic function was assessed by LV EF by Simpson’s method and GLS by averaging longitudinal 2D strain in a 16-segment LV model. Incidence and type of ventricular arrhythmia during previous six months was assessed by ICD analysis. Results: At least one episode of ventricular arrhythmia was found in 16% of Patients.

We found good correlation between LVEF estimated by Simpson’s method and GLS

(r: 0.8, P-Value <0.05). GLS had a better correlation with ventricular arrhythmia than LVEF, especially in patient with LV EF>35 % (AUC 0.8 (95%CI) vs. 0.65(95%CI),

p-Value =0.05). All patients with ventricular arrhythmia had GLS< -17.5%

(mean =10%±2) independent of EF.

Conclusions: Global longitudinal 2D strain can be used in patients with CHD or DCM with borderline EF to reclassify them into higher risk group for development of ventricular arrhythmia. It has a good correlation with LV EF measured by Simpson’s method. It needs more study to clarify the role of GLS as an indication for ICD implantation in this group.