**DELINEATING THE ASSOCIATION OF MITRAL VALVE PROLAPSE AND SUDDEN CARDIAC DEATH**

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Mitral valve prolapse (MVP) is associated with ventricular arrhythmias and sudden cardiac death (SCD). Malignant form characterized by the triad of bileaflet MVP, multifocal premature ventricular contractions (PVCs) and inferolateral T wave abnormalities was recently identified. Our study characterized patients at the MGH with MVP and SCD. ECHO lab database was searched to identify patients with MVP, while conducting an EMR search for Sudden Cardiac Death in problem lists and billing codes from 2000-2014. Patients with primary causes for ventricular arrhythmias were excluded from the study. As a result, 32 subjects with MVP and cardiac arrest were identified. Seventeen of those were excluded secondary to possible confounding etiologies, i.e. CAD, systolic dysfunction, or ruptured subvalvular apparatus. Mean age of the subjects was 64±11.3 (53% male). In 11 patients (73%) MVP affected both leaflets. Seven patients (46%) underwent mitral valve repair or replacement. Five subjects (33%) had severe, 8 (53%) had moderate and 2 (13%) had mild mitral regurgitation. Ventricular fibrillation (VF) was the first documented cardiac arrest rhythm in 85.7% of the subjects. Implantable cardiac defibrillators (ICDs) were used in all patients, 10 of whom (67%) received appropriate ICD therapies during follow­up. Even after surgical repair, 4 of 7 patients (57.1%) received appropriate ICD therapy. Prolonged QTc intervals were noted in 3 subjects, while frequent PVCs were seen in 9 of 14 subjects (64%) for whom data were available (at least one case of multifocal). Inferolateral T wave abnormalities were identified in 26.7%. Only 1 patient had an MRI with late gadolinium enhancement showing no cardiac fibrosis. In summary, the majority of subjects with MVP and SCD had bileaflet MVPs and frequent PVCs. T wave inversions were found in a minority of patients, while ventricular arrhythmias recurred following surgical mitral valve repair in the majority of the subjects.