Long Term Survival Rate Post Electrical Storm in Patient Implanted with Implantable Cardioverter Defibrillator (ICD)

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Introduction: Implantable Cardioverter Defibrillator (ICD) is highly effective in prevention life threatening arrhythmias. 10 to 40% of ICD patients experienced electrical storm in their lifetime. This may lead high mortality and morbidity, longterm outcomes are limited. Objective: To determine the long term impact of electrical storms (ES) on overall mortality. To evaluate Electrical storm survival rate in Ischemic and Non Ischemic group. Methodology: This prospective analysis of IN cohort consisting of 686 patients who treated with ICD from 1996 to Nov 2010. Total of 158 (23%) ES positive patients experienced total of 247 ES episodes (median 2, range 1 -18). This group then divided into Ischemic 96 patients (60.8%) and Non Ischemic Heart Disease 62 patients (39.2%). Median duration for the first ES occurrence was 474days (inter-quartile 662days) with median follow up of 820days (inter-quartile 1680 days). Result: ES positive group has higher mortality HR of 1.91(95%CI 1.44-4.08, p<0.001) compare to ES negative patient. Median time from ES to death is 10.8 month with mean of 27.05 ± 34.97 months. Previous VT and EF < 30% are major predictors of ES. There is no significant different in survival rate for Ischemic or Non Ischemic Heart Disease. Conclusion: ES is a strong independent predictor of mortality (HR 1.69) in ICD patients. VT ablation may be of benefit prior or immediately after ICD implantation. Keywords: electrical storm, ICD, mortality