**FREQUENCY OF IMPLANTABLE DEFIBRILLATOR (ICD) USE IN SEVERE SYSTOLIC HEART FAILURE AND EFFECTS ON MORTALITY**

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Background: Implantable defibrillators (ICDs) have been shown to improve survival and reduce mortality in symptomatic systolic heart failure (SHF) patients. Several studies have reported the underutilization of ICDs in these patients. We aimed to study the utilization of ICDs in patients with symptomatic SHF at our institution and the effects on survival.

Methods: Data from symptomatic severe SHF, NYHA class 2 and 3, with ejection fraction <25% who underwent echocardiograms between 2009-2011 was retrospectively analyzed. Clinical and echocardiographic characteristics were analyzed according to age, sex, diabetes, LVEF, smoking status and LV size.

Results: Total of 945 patients did meet the inclusion criteria. Only 339 patients (36%) received ICDs. Likelihood ratios (LR) for receiving an ICD were 1.4 for male sex (p=0.36); 0.7 for age > 40 (p=NS), 0.85 for diabetics (P=NS), 0.9 for smokers (P=NS), 1.3 for EF< 20% (P= 0.03), and 2.4 for moderate to severe LV enlargement (P<0.001). Patients were divided into 2 groups; LG=alive and DG=deceased. In patients with EF 5-10% (n=258) 45% had ICD in the LG vs 30% in the DG (P<0.05). In patients with EF >10% there was no significant difference between LG and MG (33% vs 34%, P=NS).

Conclusion: Only third of patients with ICD indication in SHF received it. Male patients, those with EF < 20% (especially <10%), and moderate to severe LV enlargement were more likely to receive ICDs. Deceased patients with EF<10% had ICD much less than the alive group, which reflects the protective effect of ICD in this group.