

Abstract

Background: The implantable cardioverter-defibrillator (ICD) has emerged as the primary nonpharmacologic option for many patients who are at continuing high-risk for fatal ventricular tachyarrhythmias.

Aim of the work: Our aim was to follow-up the patients with implanted ICDs, to assess the efficacy of ICD therapy, its impact on survival, quality of life, and monitor for its related complications.

Methodology: The present study included 75 patients (63 males and 12 females), their mean age was 47.6 ± 16.1 years. The mean LVEF was $43.12 \pm 15.8\%$. Out of the 75 pts studied, 10 had structurally normal hearts. Of the remaining 65 pts; IHD (without dilatation) was present in 6, ICM in 29, idiopathic DCM in 19, RHD in 3, congenital heart disease in 2, HOCM in 3 and ARVD in 2 pts, and one pt with Brugada syndrome. All patients were followed-up for a mean period of 54.00 ± 34.4 months.

Results:

- Non-significant change in LVEF% before and after ICD implantation (43.12% vs 45.35%, respectively), however, pts with CRT-D showed significant improvement in LVEF (27.29% before vs 39.5% after implantation, p value:0.02).

- Non-significant improvement in NYHA class before and after ICD implantation. However, pts with CRT-D showed significant improvement in NYHA class (p value:0.05).

- ICD-related complications comprised: (1) *Peri-operative* in 26.6% of pts, (2) *Short-term* in 33.3% of pts, and (3) *Long-term* in 25.3% of pts.

The incidence of inappropriate detection was 25.3% with the commonest cause is inappropriate settings in 17.3% of pts. AF comprised the commonest cause of inappropriate therapies (10.6%). Inappropriate cardioversion shocks occurred in 12% of pts vs. 9.3% for inappropriate ATP therapies.

24% of the ICD recipients were non users, with remarkable higher prevalence of ischemia in those who received ICD therapy specially in pts with cardiomyopathy.

Highly significant reduction in frequent hospital readmissions post-implantation compared to pre-implantation (41.3% vs. 96%, respectively).

Follow-up of pts showed 1st year survival of 93%, 2nd year survival of 89%, 3rd year survival of 89%, and 1st year freedom of SCD of 98%. Cardiac death occlusion 20% of pts (12% by pump failure and 4% by incessant VT, and 4% combined).

In conclusion: ICDs have no impact on LVEF or NYHA class except in pts with CRT-D, however there was significant reduction in hospital admission following ICD implantation & high survival rate. Regular follow up schedules is the corner stone in management of these pts for detection of problems and appropriate programming.

Key words: ICD, VTs, dilated cardiomyopathy.