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INCIDENCE OF INAPPROPRIATE SHOCK THERAPY IN MODERN ICD DEVICES. A SINGLE CENTER EXPERIENCE

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Objective: To determine the incidence and characteristics of inappropriate shock therapy in a series of consecutive patients with ICD. Introduction: Implantable cardioverter defibrillators have demonstrated to reduce mortality in patients with ventricular arrhythmias. However, ICD therapy is associated with the drawback of inappropriate shock therapy, which may be associated with serious complications such as pro-arrhythmia, disturbances in quality of life, and an increase in mortality. Methods: All patients followed in our ICD clinic with inappropriate shock episodes underwent review of the stored electrograms from the devices. All devices were 3rd generation ICDs with activated SVT discrimination algorithms (sudden onset, rate stability, QRS width and morphology, and analysis of atrial electrograms in dual chamber devices). Results: During 36 months mean follow-up, 24 of 290 patients (8%) received a total of 32 episodes of inappropriate shock therapy (with a total of 98 shocks, mean of 3.06 shocks per episode). Seventy-nine percent of patients had a single-chamber device implanted and in 83% of cases devices were implanted for secondary prevention. In 23 of 32 episodes, inappropriate shocks (72% of total chocks) were caused by supraventricular arrhythmias (atrial fibrillation with fast ventricular rate, sinus tachycardia or atrial flutter). The remaining 9 episodes (28% of shocks) were caused by T wave oversensing, myopotential oversensing or artifact sensing. Conclusión: Despite routine use of SVT discrimination algorithms, 8% of ICD patients continue to receive inappropriate ICD shocks during follow-up. Recognition of the mechanisms causing inappropriate shock therapy is crucial to optimise ICD programming and to avoid inappropriate shocks. The electrode, which is responsible of artifact sensing, continues to be the fragile component of the system.

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HEALTH RELATED QUALITY OF LIFE IN PATIENTS WITH REFRACTORY HEART FAILURE UNDERGOING THERAPY FOR PREVENTION OF SUDDEN DEATH

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It has been documented the impact of therapy with implantable cardioverter-defibrillator (ICD) and cardiac resynchronization therapy (CRT) on quality of life (QOL) in patients (P) with severe congestive heart failure (CHF). However, the sustained effect of these treatment modalities in the different dimensions that constitutes QOL remains controversial. Objective: To evaluate the impact of CRT and ICD in QOL of P with CHF refractory to optimal pharmacological therapy in consecutive sequential analysis in the first 6 months after implantation of these devices. Population and Methods: 96P (52P underwent implantation of CRT system combined with ICD (CRT-D) and 44P systems with ICD) followed in the primary prevention of sudden death, without detection of ventricular tachyarrhythmias during the first 6 months post- implant. P were assessed at admission, immediately before the intervention, and in outpatient clinic within 6 months. We considered the NYHA functional class, ejection fraction (LVEF) and the Kansas City Cardiomiophathy QOL Questionnaire (KCCQ). Results: In the CRT-D group, age was 64 ± 2 (37–78) years with 35P males and 17P females, LVEF 25 ± 6 and 94% in NYHA class III. At 3 and 6 months CRT was associated with improved NYHA, LVEF and QOL in the various fields and sums assessed ($\rho<0.05$). In the ICD group, age was 61 ± 13 (25–83) years with 38 P males and 6 P females, LVEF 26 ± 5 and 84% in NYHA class II. At 3 and 6 months ICD was associated with improved NYHA and QOL only in activity of daily living field, perception of life satisfaction and overall quality of life ($\rho<0.05$). Conclusion: In a selected population with severe CHF, CRT was associated with a sustained benefit held in all domains of QOL, functional class and left ventricular function. In the group with ICD, this sustained effect was restricted to functional class, the physical dimension of QOL and perception of life satisfaction.

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FACTORS RESPONSIBLE FOR POOR QUALITY OF LIFE IN PATIENTS WITH ICD

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