

Demographic and Clinical Characteristics of Implantable Cardioverter Defibrillator (ICD) Recipients: A 30 Year Analysis From the Island of Crete

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INTRODUCTION

Implantable Cardioverter Defibrillators (ICDs) are critical devices for managing patients at risk of sudden cardiac death.

OBJECTIVE

This study aims to analyze the demographic characteristics and clinical details of patients who received ICDs in Crete, utilizing data from a regional registry.

METHOD

A retrospective analysis was conducted using the ICD registry of Crete, encompassing data from 1993 to 2023. The registry included information on patient demographics, including age, gender, comorbidities, the results of electrophysiology studies, indications for ICD implantation (primary vs. secondary prevention), the type of ICD (single-chamber, dual-chamber, or CRT), and the number of device replacements.

RESULTS

A total of 1917 patients were included in the study. The majority of the patients were male (87.8% vs 12.2% female). The primary indication for ICD implantation was primary prevention, accounting for 77.8% of the cases. Most of these patients (55.5%) suffered of ischemic cardiomyopathy (ICM), while non-ischemic dilated cardiomyopathy (NIDCM) accounted for 26.9%. Electrophysiology study was performed in 73.1% of the patients; 34.5% of these were not inducible, sustained ventricular tachycardia/fibrillation (VT/VF) was induced in 46.3% and non-sustained ventricular tachycardia (NSVT) in 19.2%, respectively. Single-chamber ICDs were implanted in 36.5% of patients, dual-chamber in 54.6%, and CRT in 8.9%. A notable 32.7% of the patients underwent at least one device replacement.

CONCLUSIONS

The demographic profile of ICD recipients in Crete indicates a predominance of males with ICM. The results highlight the diversity in patient substrates, electrophysiological study outcomes, and the types and replacements of ICDs used. These findings underscore the importance of personalized care and follow-up for this high-risk population. Future research should focus on long-term outcomes and the effectiveness of ICDs in different demographic subsets.

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