

Are there gender differences in the non-prescription of Implantable Cardioverter-Defibrillators (ICDs) in primary prevention? A single-center series.

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Introduction: Primary prevention of sudden cardiac death is the main indication for ICD implantation, mainly based on left ventricular ejection fraction (LVEF). Gender differences in the diagnosis and treatment of some cardiology conditions such as myocardial infarction have been previously established.

Purpose: We aim to analyze differences in prognostic variables that could justify gender differences in the non-prescription of an ICD for primary prevention.

Methods: A retrospective selection of patients from our center during 2019 with ventricular systolic dysfunction (LVED $\leq 35\%$ in an echocardiogram) was made. We included patients at least one month after an acute myocardial infarction and with optimal medical treatment without an ICD. Death was considered during the year 2019.

Results: We initially selected 325 patients with ventricular dysfunction, of which 175 fulfilled the inclusion criteria (67.4% men and 32.6% women). ICD indication was considered in 47 patients out of the 175 selected (29.7% among men and 21.1% among women, $p = 0.7$; 70.3% among men and 78.9% among women, $p = 0.30$ for non-prescription). The index left ventricle end-diastolic volume (iLVEDV) was significantly worse in males. Females were older and had lower LVEF.

Conclusion: Although it is a unicenter study and we have only performed univariate comparisons, without considering confounding factors, we found no significant gender differences in prognostic variables that could justify differences in the non-prescription of an ICD for primary prevention.

Results

Variable	Men	Women	p-value
Age (years)	74.53 \pm 0.11	79.52 \pm 0.15	<0.01
Previous cancer disease	11 (13.25%)	4 (8.89%)	0.77
Cognitive impairment	12 (14.46%)	11 (24.44%)	0.08
NYHA class	I (12.05%)	I (6.67%)	0.23
Mean NYHA class value	II (69.88%)	II (66.67%)	
	III (18.07%)	III (26.67%)	
	2.06 \pm 0.11	2.20 \pm 0.15	
Ischemic etiology	39 (46.99%)	17 (37.78%)	0.84
Renal insufficiency	31 (37.35%)	21 (46.67%)	0.15
Syncope or palpitations	16 (19.28%)	8 (17.78%)	0.58
LVEDD index (cm/m ²)	2.57 \pm 0.11	2.71 \pm 0.15	0.23
LVEDV index (ml/m ²)	73.18 \pm 0.11	66.84 \pm 0.15	1
LVEF (%)	28.89 \pm 0.11	27.17 \pm 0.15	1
Death	17 (20.48%)	8 (17.78%)	0.64

Renal insufficiency: estimated glomerular filtration rate less than 30 ml/min/1.73m² or dialysis. LVEDD: left ventricle end-diastolic diameter. NYHA: New York Heart Association.