

The incidence of malignant arrhythmia and death outcomes in patients with ischemic and nonischemic dilated cardiomyopathy with implantable cardioverter defibrillator - results of a single center

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KEYWORDS: implantable cardioverter defibrillator, sudden cardiac death, dilated cardiomyopathy.

CITATION: *Cardiol Croat.* 2017;12(9-10):379. | <https://doi.org/10.15836/ccar2017.379>

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Objectives: The indication for implantable cardioverter defibrillator (ICD) implantation is dilated cardiomyopathy (DCM), ischemic or nonischemic genesis, after three months of optimal medical therapy, with expected survival for more than one year¹. Available data from two large randomized trials show there was no effect of ICD implantation in patients with nonischemic DCM in total mortality, but there was a significant reduction of sudden cardiac death (SCD)^{2,3}. The aim of this study was to analyze real data from our center.

Patients and Methods: During 2015 and 2016 we have implanted 35 ICDs in the primary prevention of SCD. The data were collected retrospectively and analyzed.

Results: We analyzed 33 patients (2 lost from follow up), 4 females (12.1%) and 29 males (87.9%). The average follow-up was 22.7 months. In 20 patients (57.1%) the genesis of DCM was ischemic, and in 13 patients nonischemic (42.9%). Analyzing both groups, in the ischemic group, 3 deaths were recorded (15%), while in the nonischemic group 1 death was recorded (7.7%) (p = 0.48). All three deaths in ischemic group, as well as one in the nonischemic group, were the result of the terminal stage of cardiac insufficiency. Also, in the memory of the ICD in the ischemic group, malignant arrhythmias were recorded in 4 patients (20%), while malignant arrhythmias (p = 0.12) were not recorded in the nonischemic group.

Conclusion: Comparing the obtained data from our center with data from large randomized trials we did not find benefit in total mortality in ischemic and nonischemic group^{2,3}. In those trials there was significant reduction of SCD in nonischemic DCM due to successful determination of malignant arrhythmias^{2,3}, while our data suggested no benefit of ICD implantation in nonischemic group because there was no malignant arrhythmia in that group. Our data indicate a significant reduction in malignant arrhythmias in patients with nonischemic DCM. Because of the small number of patients, the results cannot be used for definitive conclusions without further investigation.

RECEIVED:
August 28, 2017

ACCEPTED:
September 26, 2017



LITERATURE

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