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In-hospital and long-term prognosis in patients after the implantation of implantable cardioverter-defibrillators and cardiac resynchronization therapy. Ten-year results of the SILCARD register.

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Topic(s):
Implantable Cardioverter / Defibrillator

Citation:

Introduction. During last two decades, there has been a sudden increase in the number of implanted implantable cardioverter-defibrillator (ICD) and cardiac resynchronization therapy (CRT). However, there are only single reports on clinical events, including rehospitalizations, in the long-term follow-up.

Purpose. We analysed the baseline clinical characteristics, performed procedures, complications and, above all, the causes of rehospitalization and the implemented treatment in 12-month follow-up after implantation of ICD/CRT.

Patients and Methods. Out of 1 208 440 hospital stays patients with cardiovascular diseases included in the SILCARD registry, hospitalizations with ICD-9 code describing ICD or CRT implantation between 2006 and 2016 were selected.

Results. The analysis included 12.147 patients with ICD/CRT. A total number of hospitalizations amounted to 14.552. Over the years, a significant increase in the number of implanted devices and higher percentage of CRT-D was observed. Before the implantation of the device, approximately 48.2% of patients were subjected to revascularization. Over the years, a significant decrease in the percentage of implanted devices for secondary prevention, older patient age and shorter hospitalization period were observed. In-hospital and 12-month mortality were 0.4% and 8.1% accordingly. It was demonstrated that rehospitalizations due to cardiovascular causes concerned approximately 40.3% of patients with a significant reduction in the analysed period. The most frequent cause of rehospitalization was heart failure (51.4%), while stable coronary artery disease and acute coronary syndromes constituted approximately 16%. In the 12-month follow-up, nearly every tenth patient was subjected to coronarography. Approximately 5% of patients required revascularization (Figure).

Conclusion. A relatively high rates of hospital readmissions and their causes indicate the necessity for proper preparation of patients to implantation of devices and the comprehensive care after discharge.
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Figure. A - cardiovascular rehospitalizations. B - causes of rehospitalizations. C - ambulatory visits. D - coronaryography (CA), percutaneous coronary intervention (PCI), coronary artery bypass grafting (CABG).