KNOWLEDGE OF CLINICAL BENEFITS IN PATIENTS WITH REMOTELY MONITORED IMPLANTABLE CARDIOVERTER-DEFIBRILLATORS

Original research study

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Abstract

Introduction: Remote monitoring (RM) of patients with implantable cardioverter-defibrillators (ICDs) has become a standard of care. However, adoption of the RM technologies is strongly dependent on the acceptation and general awareness of benefits associated this telemedical technology.

Objective: We investigated what is the level of knowledge of the clinical benefits of RM using the Home Monitoring® system (Biotronik, Germany) and whether it could be improved by a specific focused education program led by a nurse-specialist.

Methods and Results: 163 patients (122 men, 41 women, mean age 64±77 years) were included in the study. The patients were implanted with single chambre, dual chambre and biventricular ICDs in 17.8%, 5.5% and 76.7%, respectively. Patients were randomized into a group receiving specific nurse-led education (E+) and into a control group with standard of care (E-). Specifically designed questionnaire was filled by all patients during in-hospital stay, when ICD was implanted, and after 3 months of follow-up. E+ and E- groups did not differ in any clinically relevant characteristics. Number of clinical benefits which patients were able to enumerate did not differ between the groups at baseline (Z = 1,14; p = 0.26). After 3 months of follow-up, a significant increase of number of enumerated clinical benefits of RM was observed both in the E- and in the E+ groups (Z = 6.54, df = 1, p < 0.001 and Z = 2.6, df = 1, p = 0.009, respectively), however, in the E+ group the increase was more prominent (Z = -5.215; p < 0.001).

Conclusion: Specifically designed nurse-led education program in patients with ICDs using Home Monitoring system leads to increased knowledge and patients' awareness of telemedicine, which could possibly contribute to a higher acceptance of this technology.

Keywords: education; telemedicine; Home Monitoring; CardioMessenger; implantable cardioverter-defibrillator