Device telemonitoring may observe emotional status - psychological impact of arrhythmic episodes alert.

Aneta Fronczak¹,B,E, Damian Łasocha¹,B,E, Anna Mierzynska¹,B,E-F, Maciej Sterliński¹,A-F

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1 Institute of Cardiology, Warsaw, Poland

Address for correspondence:
Aneta Fronczak, Institute of Cardiology, Warsaw, Poland
email: afronczak@ikard.pl

Damian Łasocha, Institute of Cardiology, Warsaw, Poland
email: dlasocha@ikard.pl

Anna Mierzynska, Institute of Cardiology, Warsaw, Poland
email: amierzynska@ikard.pl

Maciej Sterliński, Institute of Cardiology, Warsaw, Poland
email: msterlinski@poczta.onet.pl

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Telemedicine and e-health constitute a modern and quickly developing approach to health care provision\(^{(1)}\). There is evidence for telemonitoring of cardiac implantable electronic devices (CIED) to improve the prognosis in patients with CIED, and remote multiparameter monitoring based on defibrillation devices has become a class II b recommendation in those subjects\(^{(2,3)}\). Telemedicine has also been shown to be helpful to manage psychological status in chronic diseases, and internet-mediated interventions are believed to be effective for depression and anxiety\(^{(4,5)}\). Mental disorders related to life with an implantable cardioverter-defibrillator (ICD) are a known and common problem\(^{(6)}\). We present the case of a tele-transmission report that led to revealing ICD-related stress disorder aggravation. A male patient aged 58 years with heart failure, dilated cardiomyopathy and a history of embolic ST elevation myocardial infarction, severe left ventricular systolic dysfunction and permanent atrial fibrillation (AF) underwent implantation of a single chamber St. Jude Medical ICD Fortify VR 1233-40 for primary sudden cardiac death prevention in 2013. The next year he suffered multiple inadequate cardioverter-defibrillator shocks prompted by AF with a high ventricular rate, which was the reason to provide psychological care due to distress and depressive symptoms regarding recent arrhythmic events. Reprogramming of the device was done, with the active ventricular fibrillation (VF) zone only (230 bpm/20 intervals) and the ventricular tachycardia (VT) zone set to monitor mode (151 bpm/30 intervals). In November 2016, due to safety recommendations the patient was equipped with a transmitter and started being supervised by the St. Jude Medical Merlin.net system\(^{(6)}\). The patient has never before experienced malignant true ventricular arrhythmias to be treated by ICD.

As text message about a red alert indicating VT episodes occurred, and an immediate transmission analysis showed in total 9 episodes of AF with a rapid ventricular response – three were classified as VT with no therapy and 6 of them were correctly diagnosed as supraventricular tachycardia (SVT). A list of transmitted arrhythmic episodes is shown in Figure 1, the...
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The postulated main advantage in device telemonitoring is to provide a fast diagnosis and therapeutic actions that may be crucial to prevent life-threatening events (7). The significance of these actions is commonly well established for the following end-points: VT/VF, atrial fibrillation, pacing percentage changes or mechanical/electrical failure of the leads and device. Thus telemedicine affects in an obvious way patients’ quality of life. The underlying diagnosis may be hidden sometimes beneath those factors: an acute mental disorder was represented by arrhythmic events and required immediate care. Psychological intervention provided relief and may be the bridge to delayed upgrade and ablation procedures. We have not found in the literature related reports. Last but not least, it should be emphasized that a high-rate strategy of ICD programming(8), though disputable, turned out in this case to be crucial for the patient to prevent harmful discharges caused by supraventricular arrhythmias.

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References


