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REFERENCES

Patient Alert and Cardiac Defibrillators

Becker et al. (1) recently analyzed the utility of patient-alert features in implantable cardioverter-defibrillators (ICDs). Most modern ICD devices monitor certain parts of the defibrillation system, including lead impedance and battery status, continuously. In case of adverse incidents (e.g., unexpected decrease or increase in lead impedance, premature battery depletion) the device produces acoustic warning signals, and the system needs to be checked by the doctor. The researchers concluded that such patient-alert features are useful additional tools facilitating early detection of serious ICD complications, but they may have low sensitivity.

We wish to report a case to illustrate that such patient-alert features may confuse both the patient and the physician. A 62-year-old man was referred to an otolaryngologist because of a four-day history of recurrent short episodes of tinnitus. He had a history of anterior myocardial infarction nine years ago. Subsequently, echocardiography revealed severe left ventricular dysfunction. The patient underwent implantation of a defibrillator because of recurrent ventricular tachycardia four months ago. Otolaryngologic examination was normal. When the patient thoroughly described his medical history and his perception of the recurrent ringing sound in his ears and head, the otolaryngologist considered the presence of an external sound. Although, the otolaryngologist was not aware of the monitor systems within ICDs that sound in case of adverse incidents, he referred the patient to the cardiologist to check the defibrillator. Evaluation of the defibrillator by telemetry revealed unexpected increase in lead impedance requiring immediate surgical revision (2).

Because ICDs have been clearly documented to revert sustained ventricular tachyarrhythmias, including pace termination of sustained ventricular tachycardia and shock reversion of ventricular fibrillation, the number of patients treated with such devices for secondary and primary prevention increases rapidly. Thus, ICD patients should be informed in detail about the various features and tools of their device including patient-alert systems. Additionally, both training and education for ICDs are required not only for cardiologists and general practitioners but for other professionals within the medical community.

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REFERENCES

REPLY

In their Letter to the Editor, Auer and colleagues reported the case of an implantable cardioverter-defibrillator (ICD) patient with suspected tinnitus who presented to an ear-nose-throat (ENT) specialist. Although unaware of the patient-alert feature, the ENT doctor suspected an external sound rather than tinnitus and referred the patient to the cardiologist, who checked the patient’s defibrillator and found that an increase in lead impedance had triggered the patient-alert function. The impedance rise obviously reflected severe lead dysfunction requiring immediate surgical revision. The investigators conclude that training and education about various ICD features including patient alert should be provided to both patients and physicians. We believe that educating the entire medical community to various ICD features is hardly feasible, but undoubtedly it makes no sense to activate features such as patient alert without educating the patients. During routine postimplant ICD programming, the alert signal should be demonstrated to the patient (as available via programmer telemetry) and the alert time should be discussed and individually adapted to the patient’s waking hours. If this becomes part of the clinical routine, as in our center, the patient-alert feature may well be a useful additional tool that facilitates early detection of system-related complications (1). Moreover, even in the case presented by Auer and colleagues, the alert feature served to disclose a severe lead complication that otherwise would have been diagnosed only at the next routine follow-up visit.

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REFERENCE