ZOLL Patient Management Network Case Study: Documented Sustained VT

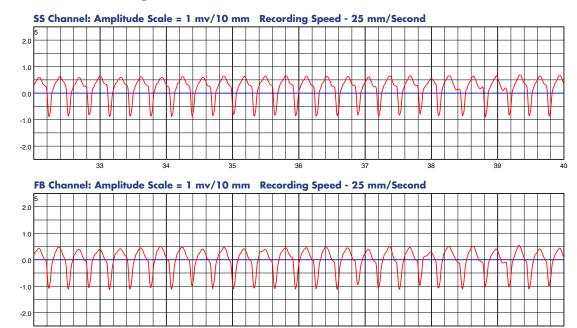


Figure 1. Portion of the patient's ECG automatically downloaded from the device and remotely viewed on the ZOLL Patient Management Network. The VT event terminated after 35 seconds.

Synopsis

The LifeVest® wearable cardioverter defibrillator (WCD) was prescribed for a 70-year-old patient with a dilated cardiomyopathy (DCM) and a Left Ventricular Ejection Fraction (LVEF) ≤35% for protection from Sudden Cardiac Death (SCD). Twelve (12) days post-discharge the patient experienced a Ventricular (VT) event at 240 beats per minute (bpm) that terminated after 35 seconds. The event was captured by the LifeVest WCD and reviewed by his medical team on the ZOLL® Patient Management Network Patient Data Management System which altered the course of treatment for the patient.

History and Plan

- A 70-year-old man presented to the hospital with cough, congestion, and shortness of breath.
- Patient was diagnosed with pneumonia and admitted to the ER.
- Significant history of chronic renal insufficiency, COPD, incomplete LBBB, systolic congestive heart failure, coronary artery disease status post 4-vessel CABG last year, type 2 diabetes, hypertension, and peripheral vascular disease.
- · Cardiac echo:
 - Left atrium markedly dilated
 - Dilated inferior vena cava with poor inspiratory collapse consistent with elevated right atrial pressure
 - Mild concentric LV hypertropy with impaired LVEF = 25%
- Pharmacy:
 - Lasix, potassium repletion, continue ACE, BB.
- The patient was discharged with the LifeVest WCD for protection from SCD.



ZOLL Patient Management Network Configuration

The Nurse Practitioner (NP) configured the ZOLL® Patient Management Network to issue orange (mid-level) alerts for events labeled as detected but not treated. LifeVest will automatically record a patient's ECG following the initiation of the treatment sequence. If the VT/VF terminates prior to a shock treatment, the ECG recording is downloaded to the ZOLL Patient Management Network.



Figure 2. Screenshot of the ZOLL Patient Management Network user's customized Alert settings.

Results

Twelve (12) days after discharge, the patient experienced an episode of ventricular tachycardia (VT) at a rate of 240 bpm. LifeVest appropriately detected the VT, and the treatment sequence was initiated. Treatment was delayed through proper patient use of the response buttons. The VT spontaneously terminated after 35 seconds. The patient was referred to an Electrophysiologist (EP) and a permanent implantable cardioverter defibrillator (ICD) was later implanted.

Identification of Sustained VT Through Remote Patient Monitoring

The patient was diagnosed with a DCM and a LVEF = 25% and prescribed the LifeVest WCD for primary prevention of SCD. The NP regularly reviews the ZOLL Patient Management Network dashboard to monitor for new alerts for the practice's current active patients. Upon dashboard review, a "detected but not treated" event was noted for the patient. Review of the ECG recordings revealed that the LifeVest had recorded a sustained VT event. Subsequent consult with an EP resulted in the implantation of an ICD.

For additional information on the ZOLL Patient Management Network, including instructions on how to enroll, contact your ZOLL LifeVest representative or visit www.zoll.com.

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