In addition, the white blood cell count (x$10^3/\mu$l), an inflammatory marker, was higher in FMF patients when compared with the controls (7.61±2.08 *vs*. 6.95± 1.31; p=0.039) (these data were not provided in the study article). Thrombocytosis is defined as an abnormally elevated platelet count. Makay et al.[4] found that platelet numbers were higher than normal (>400×10^3/μL) in 8 of 48 patients during an FMF attack and 6 of 63 patients at a time without an attack. In other studies, there were no cases with a blood platelet count higher than 400×103/μL in FMF groups.[5,6] The literature data on platelet count in FMF are conflicting, with some studies reporting an elevated blood level of platelets in FMF,[4,5] while other studies have demonstrated either no difference in platelet count between control and FMF groups,[6,7] i.e., similar to our data, or a lower platelet count in patients with FMF.[8] Therefore, given these findings, we think that platelet count may not precisely reflect inflammation in FMF.

Amyloidosis is the most serious complication of FMF disease and leads to organ dysfunction, most prominently in the kidneys. For this reason, FMF patients are checked regularly. FMF patients with amyloidosis were excluded from our study.

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Where is the missing piece of the puzzle? Failed device therapy in patients with left ventricular assist device

Dear Editor,

We read the article by Çay et al.[1] titled "Prolonged ventricular fibrillation in a patient with left ventricular assist device" recently published in the journal with great interest. The authors reported the case of a 50-year-old male who was admitted to the emergency department (ED) following 6 device discharges of 35 J to unsuccessfully terminate a detected episode of ventricular fibrillation (VF). The patient required external defibrillation with a 200-J biphasic shock to terminate the VF episode and restore the programmed pacing rate of 70 bpm. No further malignant ventricular arrhythmias were observed. It is important to note that the patient was previously implanted with a dual coil implantable cardioverter-defibrillator (ICD) and a continuous-flow left ventricular assist device (LVAD).

We would like to congratulate the authors on the management of this interesting case and for their important addition to the recently growing literature of prolonged VF in patients with LVADs. Our group recently published a very similar case (Table 1) concerning a 38-year-old male with a previously implanted biventricular ICD and a continuous-flow LVAD; the patient was admitted to the ED due to syncope and recurrent ICD discharges.[2] Device interrogation revealed appropriately delivered recurrent ICD shocks that failed to terminate the sustained VF episode. An external

Table 1. Observed characteristics between the two cases

Characteristic	Çay et al.	Gul et al.
Age	50 years	38 years
Gender	Male	Male
Significant medical history	Non-ischemic cardiomyopathy, heart failure	Dilated cardiomyopathy, heart failure
Implanted devices		
ICD	Dual-coil	Biventricular
LVAD	Continuous-flow, HeartMate 2	Continuous-flow, HeartMate 3
Reason for presentation	ED admission due to 6 recurrent ICD discharges for VF	ED admission due to recurrent ICD discharges for VF
External defibrillation required	Yes; 200-J biphasic shock	Yes; 200-J biphasic shock
Follow-up	No further malignant arrhythmias	No further malignant arrhythmias; failed DFT

ED: Emergency department; DFT: Defibrillator threshold test; ICD: Implantable cardioverter-defibrillator; LVAD: Left ventricular assist device; VF: Ventricular fibrillation.

biphasic shock of 200-J was needed to convert the patient to sinus rhythm and restore the atrial-sensed biventricular paced rhythm of 67 bpm.

We have a few comments regarding the case presented by Çay et al.[1] First, discussion of possible reasons for failed therapy in patients with an LVAD is important. The authors appropriately mentioned various reasons for failed device therapy in patients with ICDs; however, these reasons can be different or complicated in patients with an LVAD. In our article, we speculated that magnetic interference between the LVAD and ICD may cause an alteration in lead parameters, lead to electromagnetic interference, or malignant arrhythmias, as well as considering possible scarring in the left ventricle (LV) apex post-LVAD implantation causing refractory VF. Second, long-term management of ventricular arrhythmias in patients with an LVAD is also an important discussion. Çay et al. decided in favor of close follow-up rather than any interventional procedure due to the high risk of a procedure and no mortality benefit. However, we speculate that it may not be safe to leave these patients without any further intervention since the LVAD is only supporting the LV and not the right ventricle. Patients with biventricular failure will be at high risk even if they receive circulatory support through the LVAD. An episode of prolonged VF causing syncope can be very dangerous if a patient is, for example, behind the wheel of a car. Third, a notable difference between the 2 cases is the generation of the implanted LVAD (Table 1). The HeartMate 3 (Abbott, Abbott Park, IL, USA) is a third generation LVAD and compared to the HeartMate 2, it uses a non-contact design through magnetic levitation to reduce friction, shear stress, and pump thrombus formation.[3,4]

To put the puzzle together, we propose the following: Presently there are a small number of reported cases with LVAD and ICD that have presented with failed device therapy. Therefore, we cannot causally relate the failed therapy to the LVAD. Further investigation with a larger cohort is needed to investigate this topic.

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Authors reply

Dear Editor,

We would like to thank the authors for their valuable comments on our case presentation.[1] It is clear that some important considerations regarding defibrillation failure in these patients cannot be ignored. Electromagnetic interference, a possible but extremely rare condition, could be tested for using a Faraday cage during defibrillation testing.[2] As stated by the authors, much more knowledge is needed regarding the management of such patients and whether interventional options, such as ablation and defibrillator revision (in case of failed software programming), or clinical follow-up without an intervention is the key tool. Finally, such complicated patients are not permitted to do some things, such as driving, that would put themselves and others at risk.

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