

Third time's the charm, with left ventricular assist devices as well

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Introduction: Left ventricular assist device (LVAD) is life-saving therapy in patients with end-stage heart failure both as bridge-to-transplantation or destination therapy.¹ Most common complications after LVAD implantation are bleeding, thromboembolic events and infections, but some other complications like driveline damage can occur.²

Case report: We present a case of a patient who in 2011, at the age of 64, underwent an LVAD implantation due to ischemic heart disease (HeartMate II, Abbott Laboratories, Abbott Park, IL). In 2017 he was admitted to cardiac care unit because of intermittent device alarm activation, cause by driveline avulsion and continuity disruption caused by a sudden start of an engine rotor during an attempt at domestic amateur repair. Urgent cardiac surgery was performed, and the device was explanted and replaced by a new device (HeartMate III, Abbott Laboratories, Abbott Park, IL). The postoperative course was uneventful, and the patient was discharged home. Two years later, he was again hospitalized due to sudden onset of repetitive low-flow alarms. The LVAD parameters were flow of 2.3 L/min, 6400 rotations/min, and power of 5.0 W, with increase of flow in supine body position. Computed tomography scan showed LVAD outflow tract kinking and thrombotic mass in the left ventricle at the junction of the outflow tract with LVAD. Partial resection of the outflow graft and band-relief with reconstruction with 14 mm Gore-Tex® Vascular Graft was performed. In the follow-up there were no new alarms detected, and the patient was discharged from the hospital. He died of pneumonia and diabetes complications in 2021, at the age of 74, after ten years of LVAD support.

Conclusion: Driveline damage is rare but often lethal complication of LVAD. Damage that cannot be promptly repaired requires immediate pump exchange or listing for heart transplantation³.

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LITERATURE

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