Clinical Course During LVAD Support in a Patient with Ventricular Pseudoaneurysm

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I congratulate Radakovic and colleagues, who successfully implanted a durable left ventricular assist device (LVAD) in a patient with ventricular pseudo-aneurysm due to acute myocardial infarction.¹ They reported that the patient were managed for 19 months without any device-related complications. Several concerns have been raised.

One of the primary concerns following the reconstruction of ruptured left ventricular free wall is recurrent rupture. Management of LVAD requires sufficient anti-coagulation therapy to prevent thrombus complications.² Did the authors pay special attention to the anti-coagulation therapy? What was the target international normalized ratio of prothrombin time?

The patient had severe mitral regurgitation prior to LVAD implantation.¹ In general, continuous mechanical unloading and reverse remodeling improve functional mitral regurgitation during LVAD support.³ The patient received left ventricular reconstruction, and might have less chance to achieve reverse remodeling. Did mitral regurgitation improve following LVAD implantation?

Broad acute myocardial infarction often involves right ventricular failure. In general, right ventricular failure further progresses following LVAD implantation due to incremental preload on the right heart and geometrical change in the right heart.⁴ Did the authors have clinical data indicating right ventricular failure, including pulmonary artery pulsatility index and tricuspid annular plane systolic excursion?

Conflict of Interest
None declared.

References
1 Radakovic D, Penov K, Güder G, Aleksic I. Left ventricular assist device implantation in a patient with ventricular pseudoaneurysm. Thorac Cardiovasc Surg Rep 2022;11(01):e11–e13