Chronic left ventricular assist device driveline infection complicated with sepsis, left pleural empyema and left ventricular assist device pocket infection: a case report

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Case report: We present a patient with advanced heart failure who underwent implantation of a left ventricular assist device (LVAD) as destination therapy due to severe pulmonary hypertension and pulmonary vascular resistance, precluding heart transplantation. Shortly after implantation, the patient developed chronic LVAD driveline infection with MRSA colonization. Despite multiple rounds of antibiotic therapy, the patient underwent surgical debridement and driveline replacement. However, despite these interventions, the patient experienced an exacerbation of the chronic driveline infection, leading to the spread of infection to deep tissues, LVAD pocket infection, left pleural empyema, and sepsis. Through prolonged antibiotic therapy, surgical drainage of the pleural empyema, and finally, pleural debridement and atypical lingular resection, clinical stabilization was achieved with successful infection control. The subsequent clinical course in patients with LVAD pocket infection represents a significant challenge. We decided to repeat right heart catheterization to assess the patient's transplant eligibility. The patient responded favorably to LVAD decongestive therapy, evinced by decreased pulmonary vascular resistance rendering him a viable heart transplantation candidate. Following the catheterization, decision was made to enlist the patient on the heart transplantation waiting list as a definitive treatment for both the chronic LVAD pocket infection and terminal phase of heart failure. During follow-up, the patient remained on continuous suppressive antibiotic therapy, maintained good general health, and was included on the regular heart transplant list.

Conclusion: LVAD pocket infections are relatively uncommon occurrences associated with high mortality rates.[1] Heart transplantation is preferred treatment option, if possible, as literature suggests that patients on suppressive, targeted antibiotic therapy do not exhibit higher post-transplantation relapse risk, albeit with elevated mortality compared to those free of LVAD infection history. Therefore, this case report emphasizes approach to prolonged antibiotic therapy and decision-making processes in managing systemic infection and treating this complex medical condition.

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LITERATURE

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