From Shock to Transplant: A Rapid Journey Through Giant Cell Myocarditis

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Background: Giant cell myocarditis (GCM) is a rare and rapidly progressive form of myocarditis that can be fatal if not diagnosed and treated promptly. It typically affects previously healthy young and middle-aged adults, with a median survival of only 3 months without treatment. Early diagnosis and immunosuppressive therapy are critical for improving outcomes.

Case Presentation: A 68-year-old male with a history of hypertension presented to the emergency department with chest pressure, dyspnea, and flu-like symptoms for 2 days. Initial tests revealed an elevated BNP of 12,000 pg/mL. The patient experienced runs of ventricular tachycardia (VT) requiring cardioversion. EKG showed sinus tachycardia, ventricular bigeminy, and right bundle branch block. Echocardiography indicated an ejection fraction of 20-25%. Left heart catheterization demonstrated a 70% lesion in the mid left anterior descending artery. The patient deteriorated into cardiogenic shock, necessitating an Impella device and inotropic support. Endomyocardial biopsy revealed inflammatory infiltrates with multinucleated giant cells, confirming GCM.

Decision-Making: Given the fulminant presentation, pulse dose steroids were initiated for presumed GCM before biopsy results. Following confirmation, high-dose steroids and tacrolimus were started. Despite these interventions, the patient remained critical, requiring transfer to a tertiary care center, where he underwent orthotopic heart transplantation with basiliximab induction and was maintained on mycophenolate mofetil and tacrolimus post-transplant.

Conclusion: This case emphasizes the importance of considering GCM in patients with new-onset heart failure and arrhythmias. Early recognition, prompt diagnosis via endomyocardial biopsy, and aggressive immunosuppressive therapy are crucial. Advanced heart failure therapies, including mechanical circulatory support and transplantation, may be necessary, with careful long-term follow-up to manage recurrence risk.

