

Patient timeline: refractory cardiac myocarditis associated with DRESS syndrome due to anti-bipolar disorder drugs

Time	Events
5 months prior to admission	Lithium 600 mg and quetiapine 25 mg were begun for bipolar disorder.
4 months prior to admission	The patient presented with fever, morbilliform eruptions, lymphadenopathy, eosinophilia with atypical lymphocytes, and liver dysfunction. The drug lymphocyte stimulating test (DLST) was negative for quetiapine but positive for lithium. Lithium and quetiapine were discontinued. Oral prednisolone was started (1.0 mg/kg/day) for 4 months, tapered to 0.5 mg/kg/day.
First admission	Worsening skin rash and exertional dyspnoea. Echocardiography indicated moderate global hypokinesis in both ventricles with a left ventricular ejection fraction (LVEF) of 43%. The ¹⁸ F-fluoro-deoxyglucose positron emission tomography with computed tomography (FDG-PET/CT) showed diffuse FDG uptake in both ventricular walls. Endomyocardial biopsy revealed a mixed eosinophilic and lymphohistiocytic infiltration without necrosis and fibrosis.
5 days after admission	High-dose prednisolone (1.0 mg/kg/day) was started.
3 weeks after admission	Endomyocardial biopsy revealed the attenuation of eosinophil accumulation.
2 months after admission	The LVEF was improved to 61% together with reduced troponin T.
Discharge	The dose of prednisolone was reduced to 0.5 mg/kg/day.
3 months after admission	The dose of prednisolone was decreased to 0.25 mg/kg/day.
5 months after admission	FDG-PET/CT showed focal FDG uptake in the left ventricular anterior to antero-septal wall. Echocardiography indicated reduced LVEF of 43% with elevated troponin T level (0.287 ng/mL). The dose of prednisolone was increased to 0.5 mg/kg/day.
9 months after admission	Mycophenolate mofetil (MMF) was started on top of the 0.5 mg/kg/day prednisolone.
15 months after admission	FDG uptake was moderately improved. LVEF improved to 50%, but then fell again to 44%.
Second admission (17 months after the first admission)	Readmission due to worsening heart failure with New York Heart Association (NYHA) Class III. Echocardiography showed a dramatic decline in LVEF at 20%. Endocardial biopsy revealed myocyte necrosis associated with an eosinophilic and lymphocytic infiltrate.
27 months after the first admission	Patient died of uncontrolled heart failure.