Recurrence of Churg Strauss vasculitis in a transplanted heart

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In October 1987 a 22 year old man with Churg Strauss syndrome and cardiac failure underwent orthotopic cardiac transplantation. Postoperatively he had recurrent attacks of asthma associated with eosinophilia, but there were no other features of Churg Strauss syndrome. Routine endomyocardial biopsy specimens showed no rejection or vasculitis until March 1991 when an episode of moderate myocardial rejection was treated with immunosuppressive therapy. In January 1992 cardiac catheterisation showed moderate impairment of left ventricular function and diffuse left coronary artery disease but the right coronary artery was angiographically normal. In March 1992 he suddenly collapsed with electromechanical dissociation and despite prolonged resuscitative efforts he died one hour later.

At necropsy there was severe pulmonary oedema and the heart was enlarged (486 g). Histological examination of the donor myocardium showed foci of myocardial fibrosis with patchy areas of rejection and myocyte damage. There was vasculitis in the intramyocardial and epicardial arteries. In the right coronary artery there was fibrinoid necrosis in the adventitia and necrosis of the vessel wall, with chronic inflammation containing lymphocytes, plasma cells, and a few eosinophils (figure). The proximal right coronary artery was occluded with thrombus. A postmortem diagnosis of Churg Strauss vasculitis was made.

Cardiac transplantation in patients with a systemic disease is controversial, because non-cardiac manifestations of the disease may influence prognosis and the disease may affect the donor heart. This case suggests that Churg Strauss syndrome is a relative contraindication to cardiac transplantation because vasculitis may recur in the transplanted heart.