Cardiac Eosinophilic Masses in Man With Eosinophilic Granulomatosis With Polyangiitis

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A 53-year-old man with a 3-year history of chronic cough was referred to us from another hospital. He had acute renal insufficiency, a nodular rash that had appeared 3 months previously (Fig. 1), and lower extremity edema. The patient also reported shortness of breath, weakness, and an unintentional weight loss of 15 lb. His vital signs were within normal limits. His breath sounds were coarse. No cardiac murmurs or rubs were audible. Nonblanching macules were seen on his right patella and dorsal right hand. Laboratory results included an elevated white blood cell count of 21.6×10^9/L with 46% eosinophils, a normal platelet count, an elevated serum creatinine level of 2.2 g/dL, and a hemoglobin level of 10.1 mg/dL. An electrocardiogram showed sinus rhythm. A transthoracic echocardiogram revealed a mobile echodensity in the right ventricle (RV) and mildly reduced left ventricular systolic function (Fig. 2A). On transesophageal echocardiograms, a 2.6 × 0.6-cm mass attached to the posterior aspect of the RV outflow tract (RVOT) had echogenicity similar to that of the myocardium (Fig. 2B), and a mobile 1.1 × 0.3-cm linear mass stemmed from the base of the anterior left ventricular endocardium, below the mitral valve annulus (Fig. 2C).

Computed tomograms of the chest revealed bilateral ground-glass opacities. Bacterial and fungal blood cultures were negative. Histopathologic results of a kidney biopsy were consistent with antineutrophil cytoplasmic antibody–associated pauci-immune glomerulonephritis (Fig. 3). Our diagnosis was eosinophilic granulomatosis with polyangiitis (EGPA).

We gave the patient cyclophosphamide and methylprednisolone, then discharged him from the hospital with prescribed prednisone. He decided to be monitored by doctors closer to his home and was lost to our follow-up.

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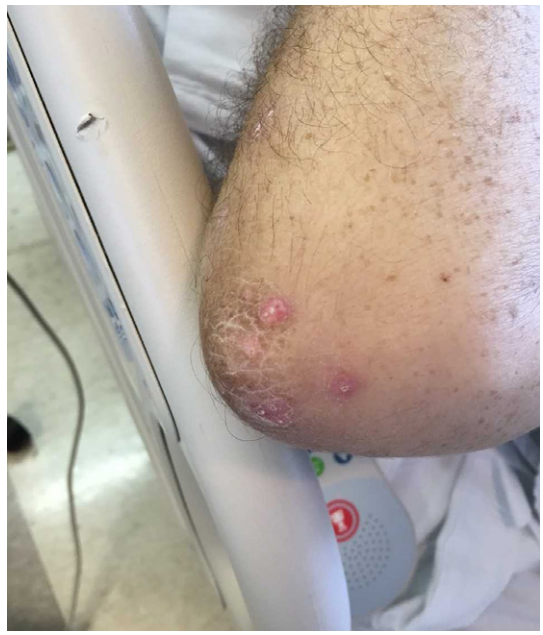

Fig. 1 *Photograph shows a nodular rash on the patient's right elbow.*

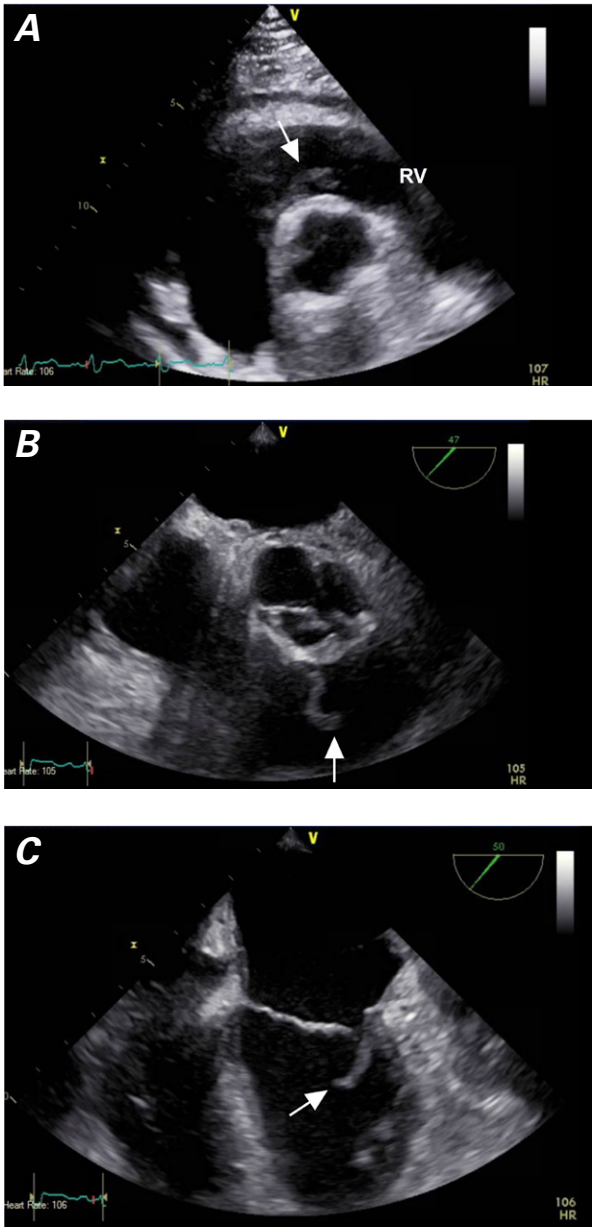

Fig. 2 ***A****) Transthoracic echocardiogram (parasternal short-axis view) shows a mass (arrow) in the right ventricle (RV). Transesophageal echocardiograms show* ***B****) a mass in the RV outflow tract (arrow) and,* ***C****) in 4-chamber view, a mass in the left ventricle below the mitral valve annulus (arrow).*

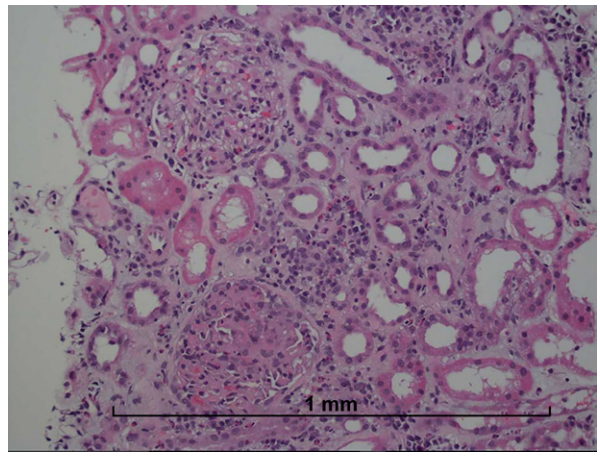

Fig. 3 *Photomicrograph from renal biopsy specimen shows focal necrotizing structures consistent with pauci-immune glomerulonephritis (periodic acid–Schiff stain, orig. ×400).*

Comment

A rare systemic vasculitis, EGPA can present with various cardiac effects, including myopericarditis, arrhythmias, arteritis, and valvulopathies.[1,2] Intracavitary thrombosis, as in this case, is rare. The leading theory is that eosinophilic infiltration of the myocardium mediates cardiac involvement.[3] This case underscores the importance of performing echocardiography in patients with EGPA.

References

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