Catecholamine-Induced Myocarditis in Pheochromocytoma

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A 25-year-old man arrived at the emergency room of his community hospital complaining of abdominal pain, headaches, and palpitations that had appeared suddenly while he was playing soccer. He had no history of hypertension. An abdominal ultrasound revealed a tumor located in the right adrenal gland.

He was subsequently transferred to our hospital for further evaluation. On admission, he presented acute pulmonary edema with severe hypertension (blood pressure, 220/120 mm Hg). He was admitted to the coronary care unit. Inotropic vasodilators and loop diuretics were administered, with rapid recovery of clinical status.

ECG showed sinus rhythm, a heart rate of 80 bpm, and T-wave inversion in the DI, DII, and AVL leads. Transthoracic echocardiography revealed left ventricular hypertrophy and diffuse intramyocardial edema on T2-weighted images and focal midwall late gadolinium enhancement (LGE). This case shows evidence of acute catecholamine myocarditis with resolution of myocardial edema after adrenalectomy.

Disclosures

None.

References


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Figure 1. Abdomen computed tomographic scan: 47.5×36.7-mm heterogeneous right adrenal mass.

Figure 2. A through C, Cardiac magnetic resonance (CMR) on presentation. Increased left ventricular wall thickness (A), diffuse myocardial edema on T2-weighted images (B), and focal midwall late gadolinium enhancement (LGE) in the inferior medial segment (C). D through F, CMR on recovery. Normal left ventricular wall thickness (D), absence of myocardial edema on T2-weighted images (E), and persistence of focal midwall LGE in the inferior medial segment (F).

Figure 3. A, Tumor (T) and normal adrenal gland (N). B, Tumor cells nests.
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**Movie Legend**

**Movie 1.** Cardiovascular magnetic resonance shows increase left ventricular wall thickness, diffuse myocardial edema on T2-weighted images, and focal mid-wall late gadolinium enhancement in the inferior medial segment. Best viewed with Windows Media Player.

**Movie 2.** Cardiovascular magnetic resonance shows normal left ventricular wall thickness, absence of myocardial edema on T2-weighted images, and persistence of focal mid-wall late gadolinium enhancement in the inferior medial segment. Best viewed with Windows Media Player.