Clinical picture

Magnetic resonance imaging of mid-ventricular obstructive hypertrophic cardiomyopathy

A 66-year-old woman consulted our hospital for class II dyspnea according to the New York Heart Association functional classification system.

She had a height of 156 cm and weight of 55 kg (after an increase of 2 kg within the past month). Her body temperature was 36.1°C, respiration rate 18 breaths/min, pulse rate 70 beats/min, equal pulse, blood pressure 104/60 mmHg; she was alert and awake at the time of consultation. As per Levine’s classification II/VI, systolic murmur was detected in the heart sounds. No engorgement of the jugular vein was observed, but pitting edema was found in her lower limbs. Serum brain natriuretic peptide was 872 pg/ml.

The left ventricular cavity appeared as two cavities in echocardiography, and adequate visualization of the cardiac apex was difficult. In cardiac magnetic resonance imaging (MRI), the mid-ventricular muscle was observed as remarkably enlarged, and at the systolic phase, the muscle completely obstructed and divided the left ventricular cavity into two (Figure 1). No significant stenosis was observed in coronary computed tomography examination. On the basis of the above observations, we diagnosed mid-ventricular obstructive hypertrophic cardiomyopathy. Although diastolic paradoxic jet flow in echocardiography is effective for such diagnosis, in some cases such as the present case, visualization in echocardiography is difficult. Thus, MRI is useful for the diagnosis of the mid-ventricular obstructive hypertrophic cardiomyopathy.¹

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Reference