

Cerebral embolization from left atrial myxoma causing takotsubo cardiomyopathy complicated with congestive heart failure

Takao Konishi¹, Naohiro Funayama², Tadashi Yamamoto²,
Daisuke Hotta², Shinya Tanaka³

¹Department of Cardiovascular Medicine, Faculty of Medicine and Graduate School of Medicine, Hokkaido University, Sapporo, Japan

²Department of Cardiology, Hokkaido Cardiovascular Hospital, Sapporo, Japan

³Department of Cancer Pathology, Faculty of Medicine, Hokkaido University, Sapporo, Japan

An 80-year-old woman who was admitted to a neurosurgery hospital, and was later transferred to cardiology hospital with a diagnosis of cardiac tumor as a possible cause of cerebral infarction. Magnetic resonance imaging and computed tomography (CT) of the brain showed multiple cerebellar infarction (Fig. 1A, B). A 12-lead electrocardiogram showed ST elevations in leads V₃ and V₄ and negative T waves with QT prolongation in leads II, III, aV_F and V₄–V₆ (Fig. 1C). Chest roentgenogram showed cardiomegaly with pulmonary edema (Fig. 1D). The laboratory tests revealed 670 ng/L of troponin T and 1220 pg/mL of B-type natriuretic peptide. Transthoracic echocardiography showed a highly mobile left atrial mass, akinesis in apical wall and hyperkinesis in basal wall of the left ventricle (Fig. 1E, F, arrows; **Suppl. Video S1**). Cardiac CT revealed a cardiac mass in the left atrium (Fig. 1G, arrow), and no significant coro-

nary artery stenosis. Scintigraphic images, using ¹²³I-β-methyl-iodophenyl pentadecanoic acid, showed apical perfusion defect (Fig. 1H, arrowheads). Cardiac tumor resection was performed for the management of impending embolization (Fig. 1I). The histopathological examination confirmed the diagnosis of myxoma. These findings suggested that, takotsubo cardiomyopathy was caused by cerebral infarction from embolization of the left atrial myxoma. Although the combination of these three pathological conditions is rare, it is important to consider the possibility of takotsubo cardiomyopathy when performing surgical treatment for cardiac tumor because hyperhydration during the perioperative period might cause aggravation of heart failure and hypercoagulability during an operation and could result in thromboembolism due to apical thrombi, thus leading to a poor prognosis.

Conflict of interest: None declared

Address for correspondence: Takao Konishi, MD, PhD, Department of Cardiovascular Medicine, Faculty of Medicine and Graduate School of Medicine, Hokkaido University, West 7, North 15, Kita-ku, Sapporo, 060-8638, Japan, tel: +81-11-706-6973, fax: +81-11-706-7874, e-mail: takaokonishi0915@gmail.com

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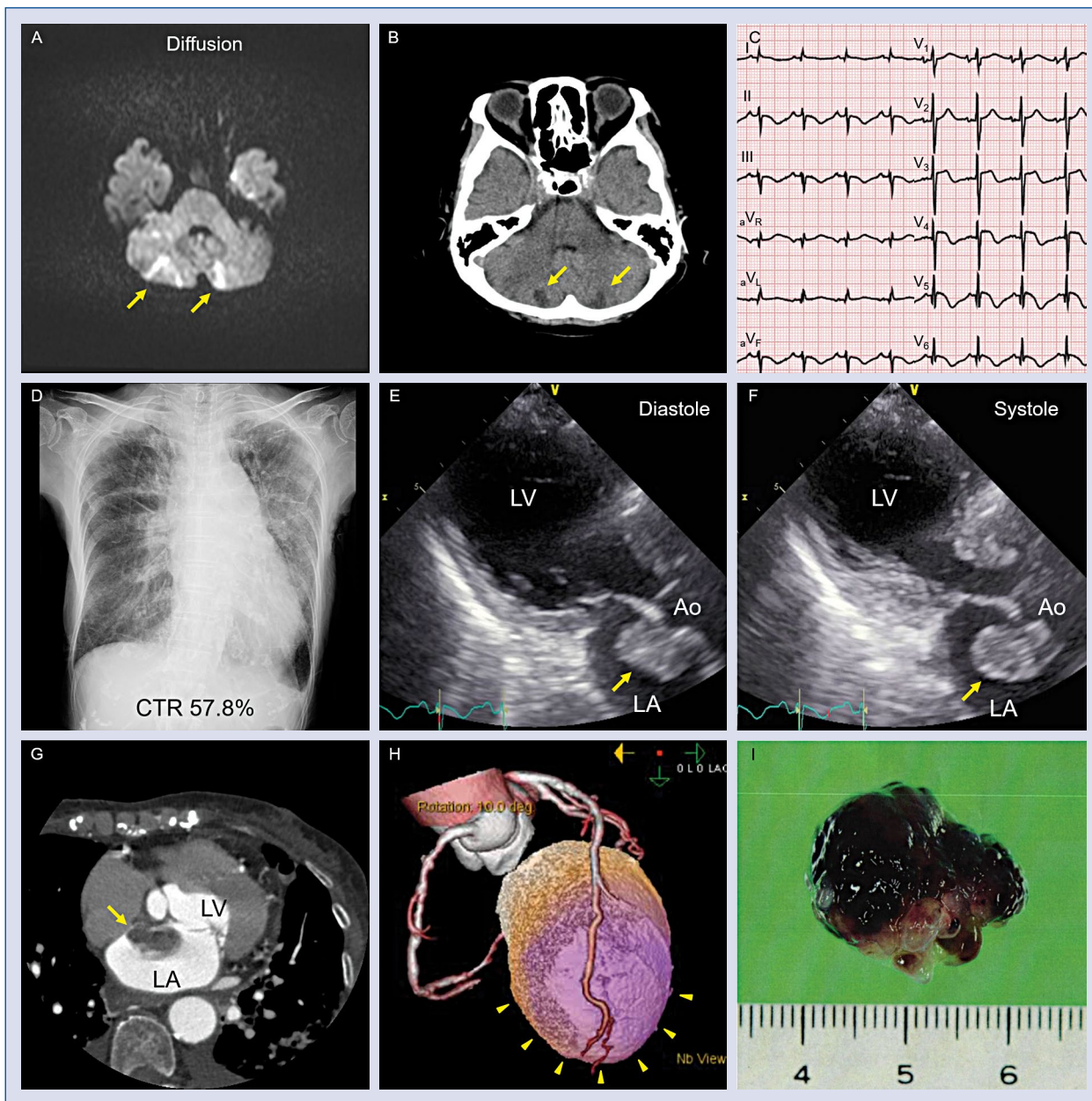


Figure 1. A, B. Magnetic resonance imaging and computed tomography of the brain; C. Twelve-lead electrocardiogram; D. Chest roentgenogram; E, F. Transthoracic echocardiography in diastole (E) and systole (F); G. Cardiac computed tomography; H. Cardiac scintigraphy; I. Resected tumor; Ao — aorta; LA — left atrium; LV — left ventricle.