Primary cardiac sarcoma is rare, and surgical resection is an effective approach. Cardiac autotransplantation is a useful technique for resecting complex cardiac tumors.1 We describe the first successful case of cardiac autotransplantation in Japan. A 21-year-old woman was referred with a diagnosis of huge cardiac tumor (Figure A). Surgery was indicated for relief of life-threatening mitral valve obstruction due to the tumor (Figure B) and for definitive diagnosis. Preoperative 18F-fluorodeoxyglucose-positron emission tomography demonstrated no metastasis and no direct invasion to neighboring organs.

We explanted the heart to obtain a good surgical view and the tumor was excised completely, together with most of the left atrium (LA). Before the LA reconstruction, the four separated pulmonary veins (PVs) were fixed to the in situ posterior pericardium to prevent postoperative PV stenosis. Subsequently, the LA was reconstructed using a large bovine pericardial patch with 2 oval holes (Figure C). Histology of the LA tumor indicated a spindle cell sarcoma. Postoperative computed tomography indicated patent PVs (Figure D). Although the patient required chemotherapy for postoperative bone metastasis, she was doing well for 30 months after surgery. This technique is useful to resect complex cardiac tumor completely, and reconstruction with a prosthetic patch may prevent local tumor recurrence.

Disclosures

The authors declare no conflicts of interest.

Reference


Received September 25, 2018; revised manuscript received December 30, 2018; accepted January 9, 2019; J-STAGE Advance Publication released online February 8, 2019  Time for primary review: 21 days

Department of Cardiovascular Surgery, Osaka University Graduate School of Medicine, Suita, Japan

Mailing address: Yoshiki Sawa, MD, PhD, Department of Cardiovascular Surgery, Osaka University Graduate School of Medicine, 2-2 Yamadaoka, Suita 565-0871, Japan. E-mail: sawa-p@surg1.med.osaka-u.ac.jp

ISSN-1346-9843 All rights are reserved to the Japanese Circulation Society. For permissions, please e-mail: cj@j-circ.or.jp

Figure. (A) Computed tomography showed a large left atrial mass. (B) Transthoracic echocardiography indicated mitral valve obstruction by a huge tumor and close proximity of the tumor to the aortic root. (C) Reconstruction of the left atrium using a large bovine pericardial patch with oval holes. Arrows, plication sutures on the patch that compensated for the size discrepancy between the patch and the explanted heart. (D) Postoperative computed tomography showed 4 patent pulmonary veins without any remaining tumors.