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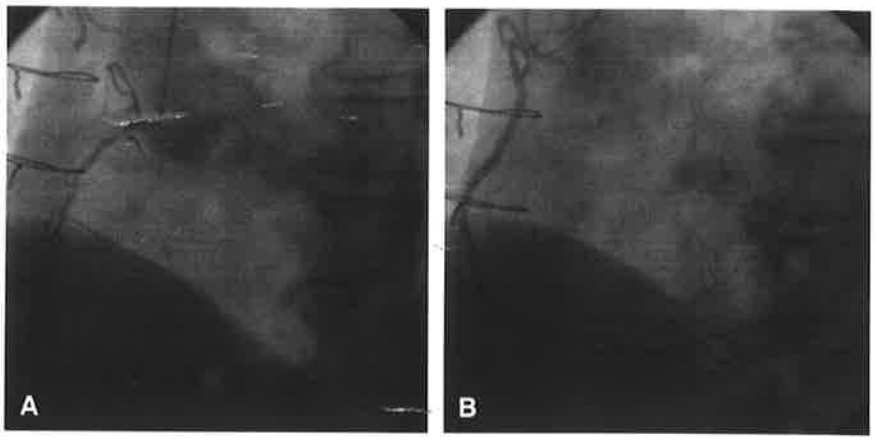

Fig 2. (A) Coronary angiography 8 years after surgery shows progression of the stenosis in native grafted coronary artery. (B) Angiography of the free gastroepiploic artery (GEA) graft shows restoration of patency.

Comment

We have observed restoration of patency in transplanted free GEA, which was demonstrated to be patent 1 month after the operation, showed severe narrowing at 1 year, and became widely patent at 8 years when the RCA lesion progressed from 50% to 90%.

Dincer and Barner [3] reported that distal narrowing (string sign) of the in situ LITA graft on postoperative angiography disappears in the late phase. Here, we document similar restoration of patency in the free GEA.

For bypassing a coronary artery having less than critical stenosis, we prefer to use the GEA as a free graft instead of an in situ graft, because the free GEA graft in aortocoronary position provides more flow than the in situ GEA graft. But some reports warn of the risk of a free GEA spasm and a low patency rate [5]. To deal with this problem, we developed a special method for the free GEA grafting. The GEA graft was harvested en bloc with its satellite veins. The gastroepiploic vein was anastomosed to the right atrial appendage for venous drainage simultaneously with the GEA being grafted in the aortocoronary position. We previously reported that this method of free GEA grafting with venous drainage showed an excellent patency rate and immunity from vasospasm in the early and midterm angiographic results.

We consider that grafted free GEA in our method is not only an arterial conduit but also a part of the living vascular system transplanted in the aortocoronary position. The free GEA graft in our method may continuously maintain anatomic patency for a living organ, even under string sign condition. And the reduction in the lumen under these circumstances is a physiologic response resulting from reduced flow through the graft. The decrease in caliber may be necessary to maintain the velocity of flow and helps to ensure patency.

We here report the case of a grafted free GEA that showed severe thinning longitudinally, which subsequently regained wide patency in association with the progression of proximal disease in the grafted coronary artery. The reversibility of the graft suggests that the grafted GEA in our method is living and expresses good long-term performance.

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Aortic Valve Lipoma

Tsutomu Matsushita, MD, PhD,*
Anh Tuan Huynh, MBBS,* Taranpreet Singh, FRACS, Sarah Armarego, FANZCA, Mark Formby, FRCPA, Alan F. Boyd, FRACS, and Geoff S. Oldfield, FRACP

Departments of Cardiothoracic Surgery, Anesthesia and Intensive Care, and Anatomical Pathology, John Hunter Hospital, New Lambton, Australia

Cardiac lipoma (especially on the aortic valve) is extremely rare. We report a patient suffering from shortness of breath, chest pain, and recent presyncopal episodes who was found to have a mass on the aortic valve with

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*These authors contributed equally to this article.

Address correspondence to Dr Matsushita, Department of Cardiothoracic Surgery, John Hunter Hospital, Lookout Rd, New Lambton, NSW, 2305, Australia; e-mail: atmatsu@tokyonet.com.au.

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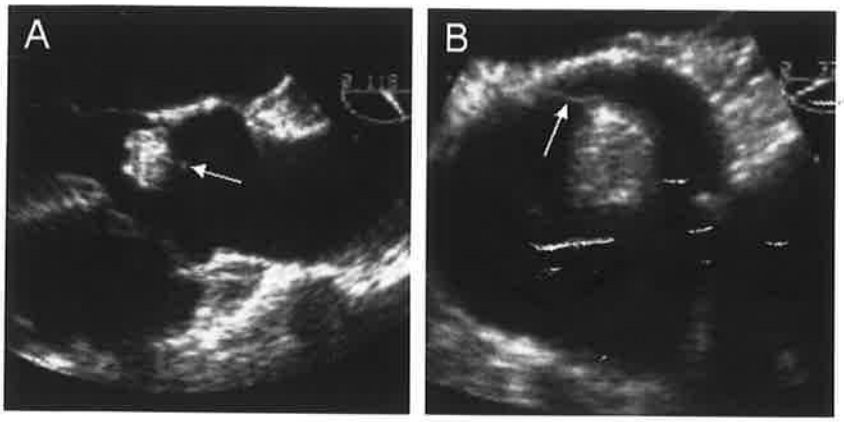

Fig 1. The transesophageal echocardiogram of the (A) long axis view and the (B) short axis view. A hyperechoic homogenous smooth surface mass directly arising from the ventricular side of the left coronary cusp of the aortic valve (arrows).

mild aortic regurgitation. The patient had an uneventful aortic valve replacement.

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Lipoma, the tumor composed of adipose tissue is the second most common primary benign neoplasm of the adult heart after myxoma, followed by fibroelastoma [1]. This can occur anywhere in the heart including the myocardium, pericardium, endocardium and epicardium, and the intracavitary lesion may manifest with dyspnea secondary to blood flow obstruction. We present an extremely rare case of aortic valve lipoma in an adult patient.

A 61-year-old woman had recently been suffering from shortness of breath, chest pain, and presyncopal episodes. Cardiovascular examination revealed a mild, early diastolic heart murmur. Transthoracic echocardiography demonstrated a mass (1.4 cm in diameter) arising from the aortic valve. It was believed to be caused by either a primary cardiac tumor, such as a fibroelastoma, or by her previous history of five resections of primary malignant melanomas and three secondaries removed in the past 25 years of metastatic melanoma.

She was referred to surgery and transesophageal echocardiography (Fig 1) in the operating room confirmed the findings of the transthoracic echocardiography with the additional information that the hyperechoic broad-based smooth surface mass was arising from the left coronary leaflet. There was mild aortic regurgitation. The patient was placed on cardiopulmonary bypass. After cardioplegic arrest, the ascending aorta was opened and a 1.2 × 1.0 × 1.0 cm encapsulated pedicled mass arising from the ventricular side of the left coronary leaflet was found and excised with the valvular leaflet (Fig 2). A 25-mm sized bioprosthetic aortic heart valve was implanted. The histopathology revealed that the yellow well-encapsulated tumor was located within the substance of the leaflet consisting of a well-circumscribed lobular proliferation of predominantly mature fat cells. The appearances were consistent with a lipoma of the valve leaflet (Fig 3). The postoperative course was uneventful. The patient was discharged on postoperative day 6.

Comment

Primary cardiac tumors on the valve are rare. Approximately 75% of these constitute papillary fibroelastoma followed by myxoma and fibroma [2]. Lipomas on the valve are extremely rare, and we believe that seven lipomas on the mitral valve, three on the tricuspid valve, one on the pulmonary valve, and only one on the aortic valve have been previously reported [3, 4]. The wide-

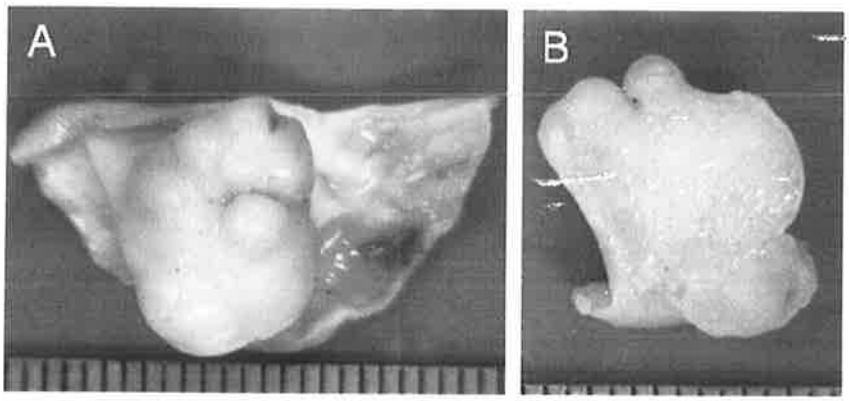

Fig 2. (A) Macroscopic view of the yellowish encapsulated tumor on the excised left coronary cusp of the aortic valve. (B) The cross section of the fatty tumor.

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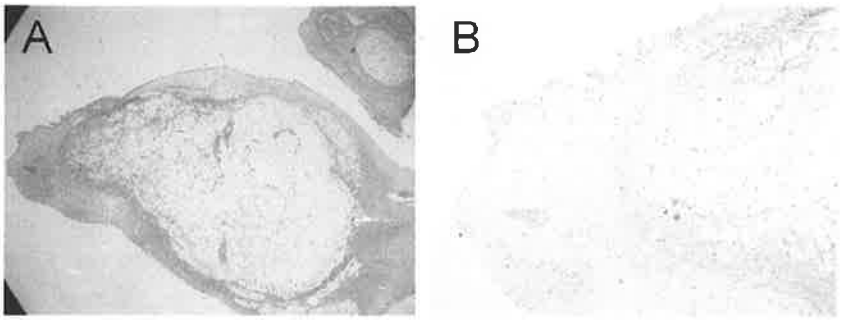

Fig 3. Histologic aspect of the tumor. (A) The tumor consists of well-circumscribed lobulated adipose tissue. (B) Higher power of tumor histology showing uniform mature fat cells.

spread use of transthoracic echocardiography for any clinical cardiac-related symptoms has shown a number of masses on the cardiac valves as found in our case. In this case, papillary fibroelastoma, which was the major primary cardiac tumor on the valve, was the most probable diagnosis from the echocardiography. The development of radiologic imaging, especially magnetic resonance (MR) imaging may show the nature of the tumor [5, 6]. The MR images demonstrate a smooth, round mass with a signal intensity characteristic of fat. However, considering that this patient had a significant past history of malignant melanoma resections and that 50% of patients with metastatic malignant melanoma are found to have had cardiac involvement based on autopsies [7, 8], we believed that the mass could be a metastatic melanoma. The neoplasm, including benign lipoma on the valve, can cause either valve regurgitation or obstruction leading to lethal symptoms such as syncope. The treatment of choice is surgical resection. Although the color and shape of the tumor was more consistent with those of a benign tumor rather than a malignant melanoma, the aortic valves were totally excised to avoid the risk of local recurrence of tumor. The patients generally have good outcomes.

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Localized Pericardial Constriction Resulting in a "Dumbbell" Heart

Zainul A. Hamdulay, MCh, Pawan Kumar, MCh, Mohammed Ali, MCh, Shilpa S. Bhojraj, MD, Sanjesh B. Jain, MD, and Anil M. Patwardhan, MCh

Departments of Cardiovascular Surgery and Cardiac Anaesthesia, Prince Aly Khan Hospital, and Department of Cardiovascular Surgery, King Edward Memorial Hospital, Mumbai, India

We describe an unusual case of a young man presenting with calcific constrictive pericarditis. The patient had a history of restrictive cardiomyopathy and pericardial effusion during infancy and received antituberculous treatment. Investigations revealed the presence of thickened pericardium and a thickened calcific constrictive band around the atrioventricular groove posteriorly and over the infundibulum anteriorly. Intraoperatively, the band caused the heart to have a "dumbbell" appearance. A pericardiectomy was performed along with excision of the constricting band. The patient had an uneventful recovery.

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Constrictive pericarditis is an uncommon but potentially curable pathology. Localized pericardial constrictions are very rare. We report a case of a patient presenting with constrictive pericarditis, with an accompanying tight constrictive ring along the atrioventricular groove posteriorly and crossing the infundibulum anteriorly, resulting in a dumbbell-shaped heart.

A 23-year old man was admitted to Prince Aly Khan Hospital with complaints of class II dyspnea, easy fatigability, and pitting pedal edema. When the patient was 2 years old, he was admitted with fever, cough, and breathlessness. He was then investigated and was diagnosed as a case of restrictive cardiomyopathy and pericardial effusion. The patient was empirically started on antituber-

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Address correspondence to Dr Kumar, Department of Cardiovascular Surgery, Prince Aly Khan Hospital, Nesbit Rd, Mazagaon, Mumbai, 400 010, India; e-mail: pawkum73@yahoo.com.

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