A 27-year-old man presented to our department with palpitations; he had no other cardiac symptoms and his medical record was unremarkable. Physical examination was normal except for a 3/6 systolic murmur at the left sternal border. Transthoracic echocardiography showed an echo-free tunnel-shaped space (14 × 20 mm) from the LV to the RA (Fig. 1), in which blood flow travelled forward in systole (Fig. 2). White blood cell count and haemoglobin and electrolyte concentrations were normal; no elevated cardiac enzymes were found. A chest X-ray showed no abnormalities. An electrocardiogram showed normal sinus rhythm. There were no signs of endocarditis on transthoracic echocardiography. The patient underwent surgical neoplasty successfully using cardiopulmonary bypass. During surgery, a communication defect was found between the LV and the RA, below the right coronary cusp.

A Gerbode-type defect is a ventricular septal communication defect directly between the LV and the RA. It was first described by Dr. Gerbode in 1958. Two types of LV to RA communication are described (supravalvular and intravalvular), depending on whether the defect in the membranous septum is above or below the tricuspid valve. The large systolic pressure gradient between the LV and the RA would be expected to result in a high-velocity systolic Doppler flow signal in the RA and can be sometimes be mistakenly diagnosed as a tricuspid regurgitant jet simulating pulmonary arterial hypertension. These defects are usually congenital, but rare cases have been described secondary to bacterial endocarditis, myocardial infarction and endocarditis. No information about history of trauma, myocardial infarction or endocarditis was acquired after careful examination and questioning. The aetiology of the LV to RA communication in this case was considered to be congenital anomaly.

**Abbreviations:** LV, left ventricle; MRI, magnetic resonance imaging; RA, right atrium.

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Figure 1. Two-dimensional echocardiography shows an echo-free tunnel space at the commissure between the left ventricle (LV) and the right atrium (RA). LA: left atrium.

Colour flow imaging in the parasternal short, apical short-axis and subcostal projections is the best echocardiographic method for showing the defect and helping to distinguish it from other conditions, such as a ruptured sinus of Valsalva aneurysm or an endocardial cushion defect. In addition, cardiac computed tomography and MRI have been used to characterize this defect. Because more precise delineation of anatomy and evaluation of function can be obtained with MRI than with echocardiography, the former technique is particularly useful for evaluating this defect.

Disclosure of interest

The authors declare that they have no conflicts of interest concerning this article.