

Double orifice mitral valve

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A 49-year-old man with no symptoms and with a medical history not including cardiac disease underwent echocardiographic examination to assess the origin of an apical systolic murmur.

Transthoracic echocardiography with harmonic tissue imaging (Fig. 1A) revealed that the mitral valve had two orifices, one anterior, close to the anterior wall of the left ventricle, and the other one posterior. Color Doppler imaging (Fig. 1B) showed that the diastolic mitral flow was divided into two clearly distinct streams. Transesophageal echocardiography (Fig. 2A) confirmed a double orifice mitral valve;

there were separate diastolic flow images of equal size (Fig. 2B), suggesting that the two orifices were balanced.

Mild mitral incompetence, characterized by a double regurgitant jet, was also evident; in addition, the presence of a bicuspid aortic valve was also diagnosed.

A double orifice mitral valve is a rare congenital abnormality, often associated with other cardiac malformations, in particular endocardial cushion defects, a bicuspid aortic valve and aortic coarctation. A double orifice mitral valve may also be consequent to surgical operations performed with the aim of correcting mitral valve prolapse.

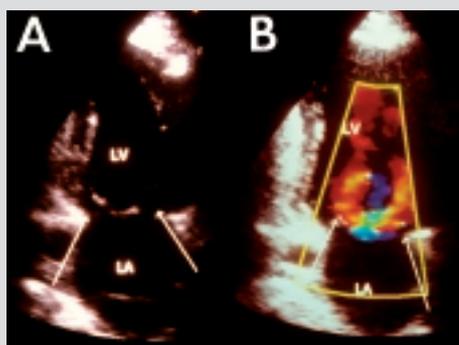


Figure 1. A: transthoracic echocardiogram (apical 2-chamber view). B: color Doppler imaging of the mitral valve flow. Arrows point out the two separate valve orifices. LA = left atrium; LV = left ventricle.

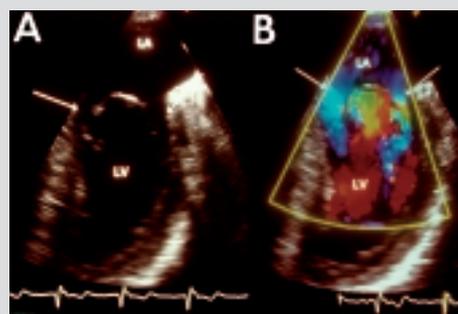


Figure 2. A: transesophageal echocardiogram (longitudinal view). B: color Doppler imaging of the mitral valve flow. Arrows point out the two separate valve orifices. Abbreviations as in figure 1.