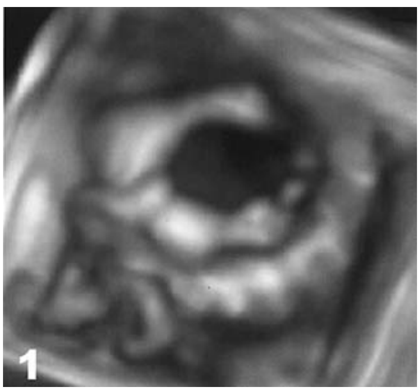

Fig. 1.

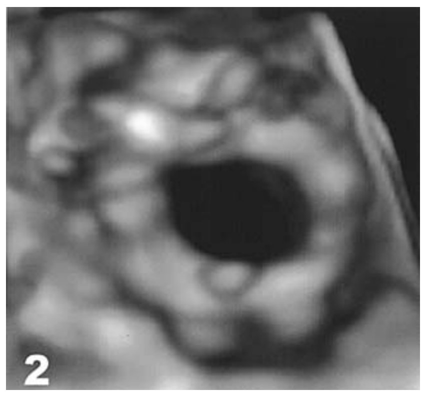

Fig. 2.

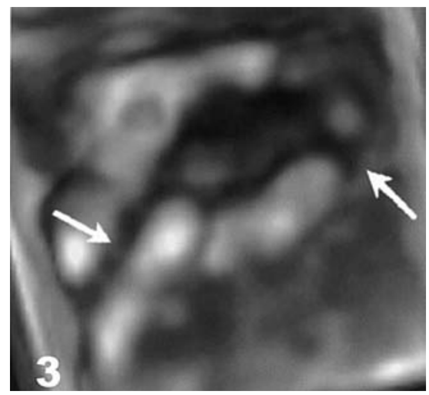

Fig. 3.

Percutaneous Mitral Valvuloplasty Guided by Three-Dimensional Echocardiography

A 52-year-old patient with a history of rheumatic mitral stenosis was followed periodically at the cardiac outpatient clinic for dyspnea that eventually progressed to dyspnea on minimal exertion. The mitral valve had a score of 8 on echocardiography, basically because of valve thickening and diminished mobility, with minimal calcification. The anatomy of the valve permitted treatment with percutaneous mitral valvuloplasty, and we chose to perform the procedure guided by three-dimensional real-time echocardiography. The images show the mitral valve as seen from the left atrium.

The baseline study showed severe stenosis secondary to rheumatic fever (an area measuring 0.6 cm^2), with thickening of the leaflets and fusion of both commissures (Figure 1). After initial inflation with a 26-mm Inoue balloon for a body surface area of 2.2 m^2, we observed dilation of the mitral orifice and an orifice area of 0.8 cm^2, no anatomical changes in either of the commissures (Figure 2). To achieve optimum, lasting results, we inflated the balloon a second time in an attempt to rupture both commissures (arrows), and obtained a mitral orifice area of 1.2 cm^2 (Figure 3). Three-dimensional transthoracic real-time echocardiography provided precise information on the anatomical changes induced by inflation with the Inoue balloon.

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