

Images in Cardiology: Remarkable Correlation of Subaortic Membrane Visualization by Three-Dimensional Echocardiography and at Surgery

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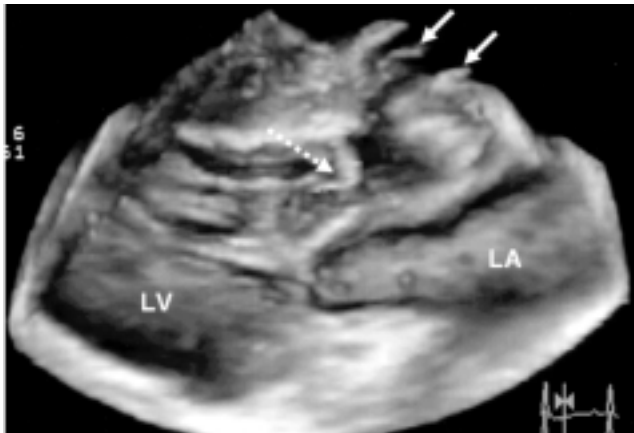


FIG. 1 Three-dimensional echocardiographic long-axis view during systole, demonstrating hypertrophy of the left ventricle (LV), with the left atrium (LA) visualized. The aortic valve (solid arrows) is normal and opens well, and a discrete subaortic membrane (dashed arrow) is seen.

In a 38-year-old man who presented with chest pain and dyspnea, transthoracic and transesophageal echocardiography revealed a subaortic membrane with a peak gradient of 61 mmHg. Prior to surgery, live transthoracic three-dimensional (3D) echocardiography was performed using a Sonos 7500 machine (Phillips, Andover, Mass.) (Fig. 1). At operation, the diagnosis of subaortic membrane was confirmed, with remarkable correlation of the 3D echocardiographic images and anatomic findings before (Fig. 2A) and after (Fig. 2B) membrane excision. The peak gradient decreased to 9 mmHg post-operatively. The patient recovered with alleviation of his symptoms.

Reference

Vogel M, Ho SY, Lincoln C, Yacoub MH, Anderson RH: Three-dimensional echocardiography can simulate intraoperative visualization of congenitally malformed hearts. *Ann Thorac Surg* 1995;60:1282–1285

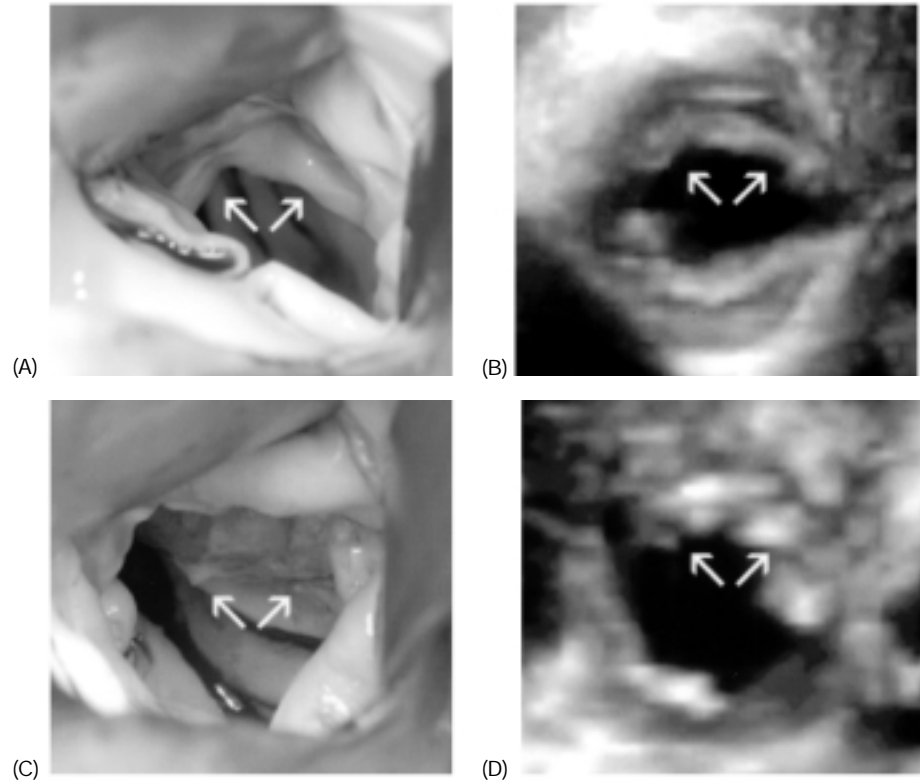


FIG. 2 Correlation of anatomical findings at surgery (A, arrows) and by three-dimensional (3D) echocardiography (B, arrows) prior to membrane excision. Correlation of anatomical findings at surgery (C, arrows) and by 3D echocardiography (D, arrows) after membrane excision.