

IMAGES IN INTERVENTION

Clipping the Alfieri Stitch



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A 75-year-old woman underwent a surgical correction of severe mitral regurgitation (MR). The valve morphology was characterized by chordae rupture (P2), prolapse (A2), and an unusual small anterior valve area with a restrictive posterior leaflet. The correction comprised chordae replacement P2/A2 without annuloplasty due to a tight annulus. Finally, an Alfieri stitch was performed.

Four weeks later, the patient presented with dyspnea. Echocardiography revealed a rupture of the Alfieri stitch (Figures 1A and 1B, Online Videos 1 and 2) with severe MR (Figure 1C, Online Video 3) and a mitral valve area of 2.47 cm² (Figure 1D). The patient did not prefer to undergo a reoperation, and the heart team's consensus was an interventional strategy with an "edge-to-edge" repair.

To prevent significant mitral stenosis, we performed a thorough hemodynamic monitoring by simultaneous measurements with 1 pigtail catheter in the left atrium and 1 in left ventricle (Figure 1E). The initial transvalvular gradient was 6 mm Hg (Figure 1F). Using 3-dimensional echocardiography, the clip was positioned and the grasp was done (Figure 1G,

Online Video 4). Before final detachment of the clip, simultaneous measurements showed a decrease of the v-wave (63 to 30 mm Hg) and a mean gradient of 8 mm Hg (Figure 1H). Thus, the clip was released. Three-dimensional echocardiography confirmed a significant reduction in MR and the mitral valve area of 1.8 cm² (7 mm Hg) (Figures 1I, 1J, and 1K, Online Videos 5 and 6). On follow-up, the patient is doing well.

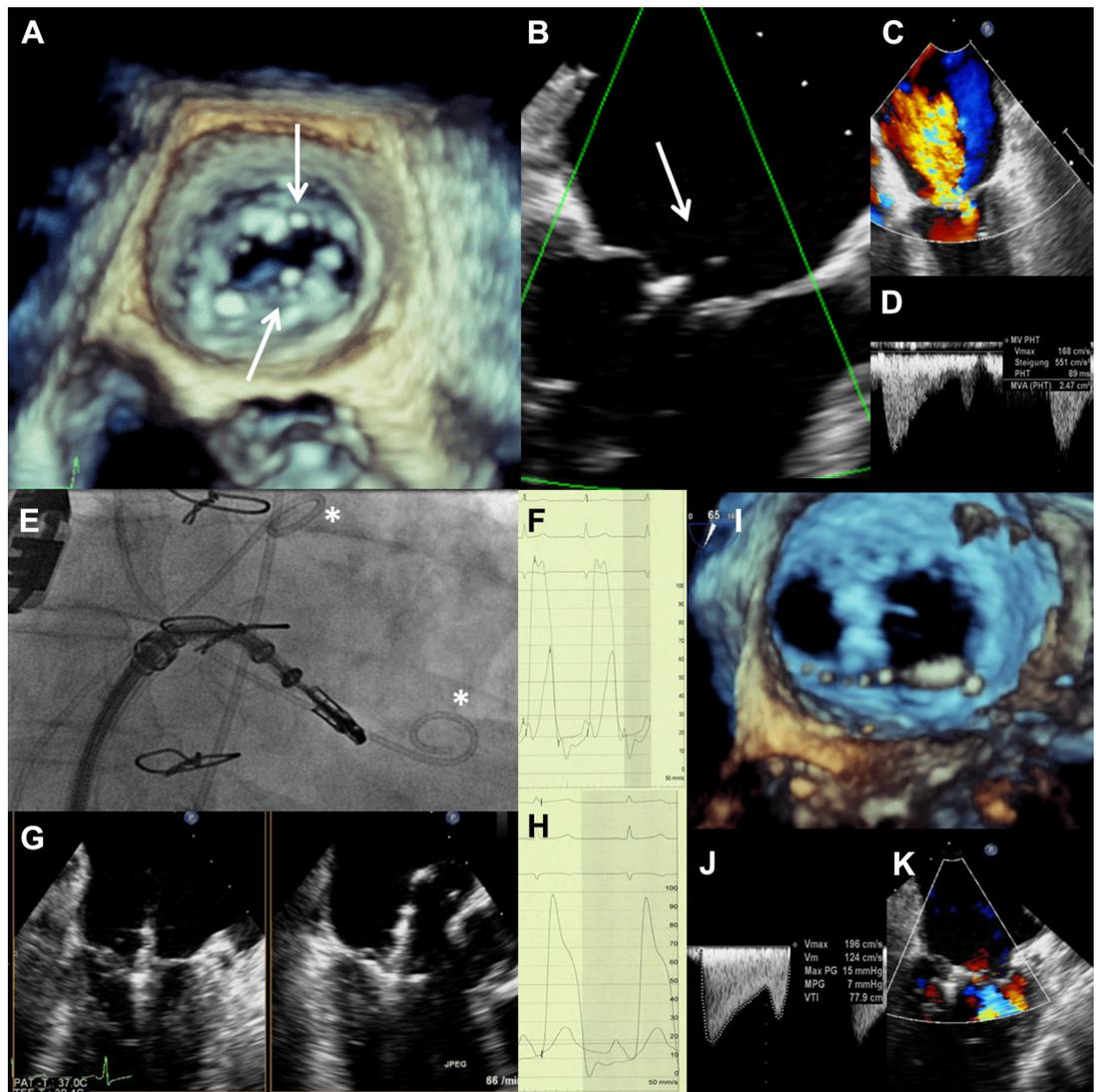
This case highlights the feasibility and efficacy of MitraClip therapy as a bail-out strategy after failure of a surgical "edge-to-edge" repair.

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APPENDIX For supplemental videos, please see the online version of this article.

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FIGURE 1 Interventional Edge-to-Edge Repair of the Failed Surgical Edge-to-Edge Repair

Three-dimensional (A) and 2-dimensional (B) echocardiography of the failed surgical edge-to-edge repair (arrows, [Online Videos 1 and 2](#)) with severe mitral regurgitation ([Online Video 3](#)) (C) and mitral valve area by pressure half time (D). (E) One pigtail catheter in the left atrium and 1 in left ventricle for the transvalvular gradient (F). (G) Echocardiography of the grasp ([Online Video 4](#)). (H) Transvalvular gradient after the grasp. (I) Three-dimensional echocardiography of the clip with the mitral valve area by pressure half time (J) and a significant reduction in mitral regurgitation (K, [Online Videos 5 and 6](#)).