

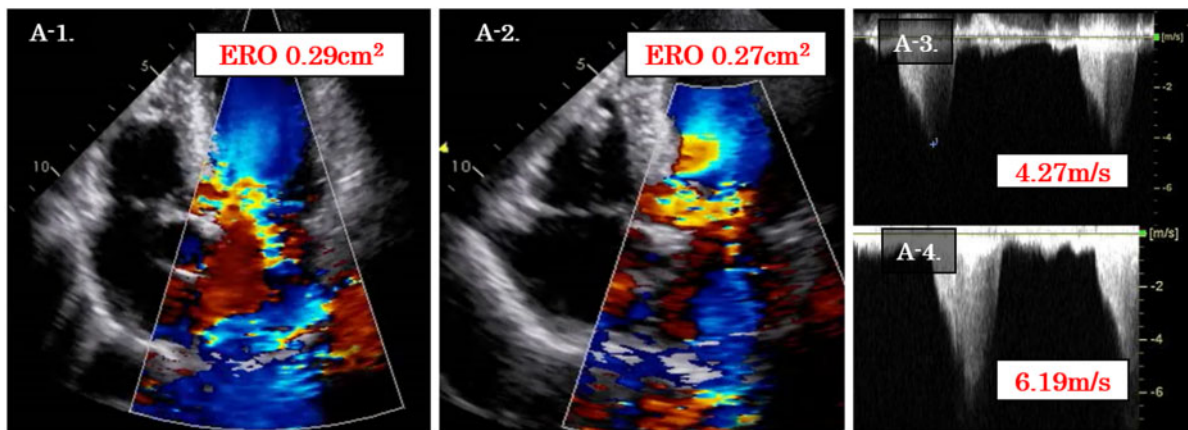
The efficiency of exercise stress echocardiography for evaluating symptomatic mitral regurgitation

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A Preprocedural ESE



B Postprocedural ESE

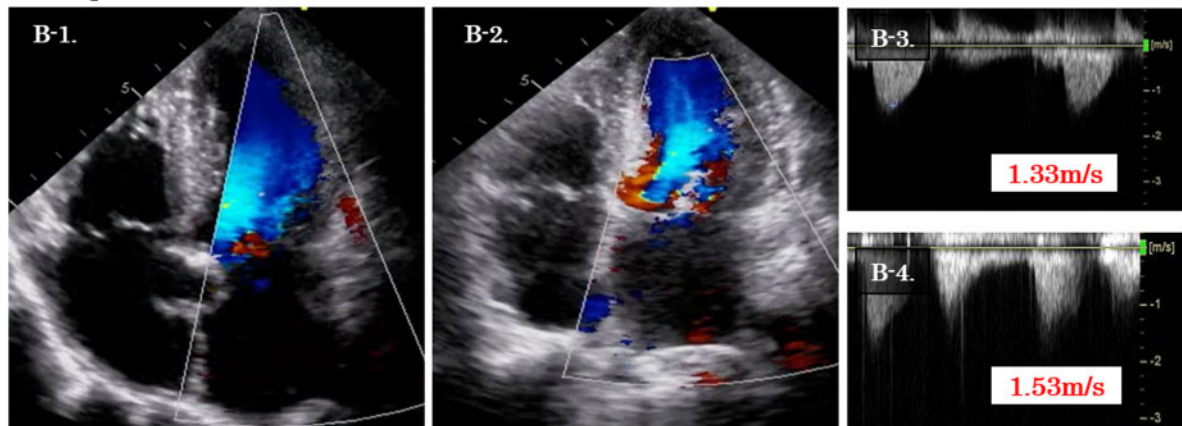


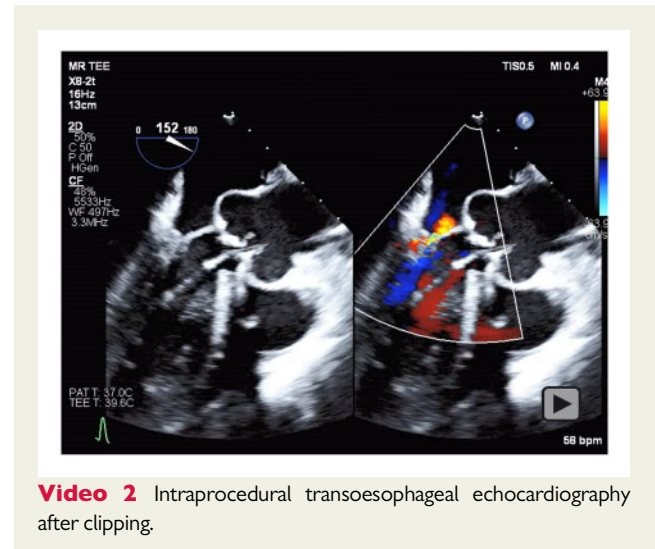
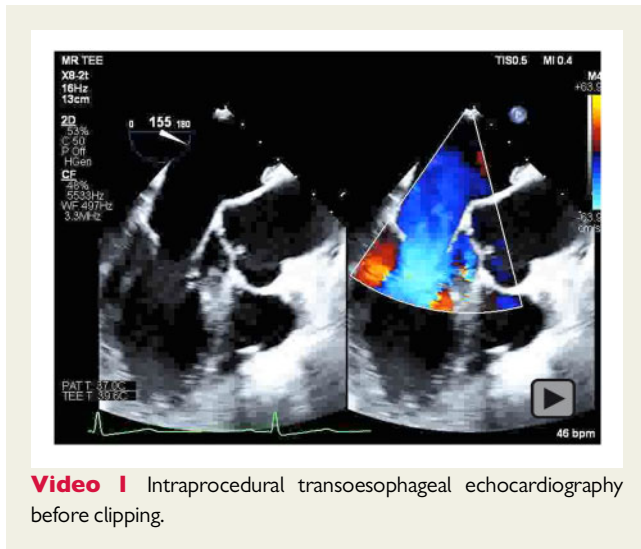
Figure 1 Exercise stress echo before and after MitraClip therapy.

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We report a case of symptomatic mitral regurgitation with systolic anterior motion (SAM-MR) evaluated by exercise stress echocardiography (ESE), which was successfully treated with MitraClip™ (Abbott Medical, Abbott Park, IL, USA). A 76-year-old woman with a history of hypertrophic obstructive cardiomyopathy had exertional dyspnoea despite medical therapy (5 mg dose of amlodipine and bisoprolol) and was admitted to our hospital due to heart failure. The echocardiogram showed a moderate-to-severe MR with an effective regurgitant orifice area of 0.37 cm² and a regurgitant volume of 69 mL/s (Video 1). A left ventricular outflow tract (LVOT) obstruction was observed. ESE showed an elevated post-exercise LVOT gradient [rest 4.27 m/s (Figure 1, Panels A-1 and A-3), during-exercise 6.19 m/s (Figure 1, Panels A-2 and A-4)] and pulmonary hypertension (PH) assessed by estimated systolic pulmonary artery pressure. The use of a MitraClip™ improved her condition (New York Heart Association class changed from III to I) Postprocedural transoesophageal echocardiogram showed no residual MR and mean mitral valve pressure

gradient was 3.9 mmHg (Video 2). Three months later, ESE showed improvement in exercise-induced PH, MR, and LVOT obstruction [rest 1.33 m/s (Figure 1, Panels B-1 and B-3), during-exercise 1.53 m/s (Figure 1, Panels B-2 and B-4)]. ESE showed some exertion symptoms that were not evaluated by resting echocardiology. ESE is a potentially useful tool to assess the improvement of SAM-MR following MitraClip™ therapy.

Consent: The author/s confirm that written consent for submission and publication of this case report including image(s) and associated text has been obtained from the patient in line with COPE guidance.

Conflict of interest: M.I. is consultant for Abbott vascular. The other authors have no conflicts of interest to declare.

Ethical approval: Local Review Board approval was obtained.

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