Postinfarction ventricular septal defect secondary to infective endocarditis

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A 72-year-old man with acute Staphylococcus aureus endocarditis involving the aortic and mitral valves underwent an urgent operation due to severe cardiac failure aggravated by a newly developed ventricular septal defect (Fig. 1 and Video 1). Preoperatively, electrocardiography showed insignificant findings of transmural myocardial infarction and echocardiography revealed unimpaired left ventricular free wall motion (Video 2). Postoperatively, coronary angiography revealed occlusion of a septal perforator.

Figure 1: Electrocardiographs showed a left anterior fascicular block and a right bundle branch block (A). Echocardiography revealed anterior basal septal akinesia of the left ventricle with a left-to-right shunt (Video 1), unimpaired left ventricular free wall motion (Video 2), oscillating masses on the aortic and mitral valves (B and C; arrows) and moderate-to-severe regurgitation of the aortic, mitral and tricuspid valves. In the operating room, a well-demarcated, yellowish protrusive infarct tissue, 2.5 cm in diameter (D, arrow) with an interventricular communication (D, arrowhead) was seen through the tricuspid valve. The 2-month follow-up coronary angiography revealed an intact coronary artery system except for an interrupted septal perforator (E, arrow).
Video 1: Preoperative transthoracic echocardiography with colour Doppler, showing a left-to-right shunt.

Video 2: Preoperative transthoracic echocardiography demonstrating unimpaired left ventricular wall motion.