Journal of Cardiothoracic and Vascular Anesthesia 000 (2022) 1–2

Contents lists available at ScienceDirect

Journal of Cardiothoracic and Vascular Anesthesia

journal homepage: www.jcvaonline.com

Letters to the Editor

Intracardiac Echogenicity During Cardiopulmonary Bypass in a Vasoplegic Patient Undergoing Coronary Artery Bypass Grafting: To Explore or To Ignore

To the Editor:

Intracardiac thrombus formation during cardiopulmonary bypass with full heparinization and adequate activated clotting time is uncommon,[1,2] but it can be catastrophic given the potential of intracardiac thrombus to embolize and cause stroke, end-organ infarction, and acute limb ischemia.[3] Spontaneous left ventricular thrombus formation during cardiopulmonary bypass in coronary artery bypass grafting is rare. A 62-year-old man with a history of heart failure with progressively declining ejection fraction and multivessel coronary artery disease presented for an elective coronary artery bypass grafting. After removal of the aortic cross-clamp, an echogenicity was seen adjacent to the lateral wall of the left ventricle, concerning for a left ventricular thrombus (Fig 1). The heart was rearrested, and a left atriotomy was created. The surgeon was able to remove the left ventricular thrombus in 2 pieces through the mitral valve (Fig 2). No residual thrombus was observed after cardiopulmonary bypass. The patient was neurologically intact after the surgery, and had a relatively unremarkable postoperative course.

The underlying etiology of the left ventricular thrombus in this patient was unclear. It is possible that the left ventricular thrombus developed as a result of inadequate left ventricular venting and decompression. The activated clotting time exceeded 400 seconds at all times during cardiopulmonary bypass, so inadequate heparin anticoagulation was unlikely to be responsible for thrombus formation. However, cardiopulmonary bypass is highly thrombogenic, and the thrombin

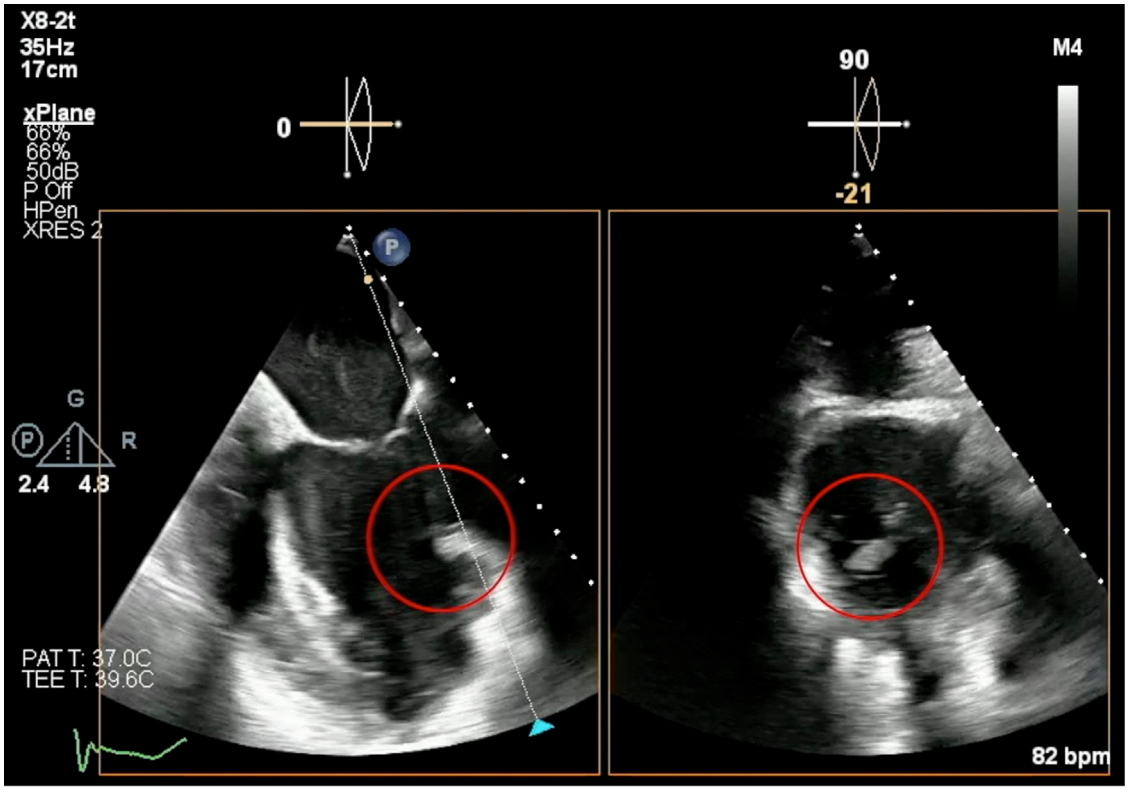

Fig 1. Transesophageal echocardiography prior to separation from cardiopulmonary bypass showing an echogenicity (circled in red) in relation to the lateral wall of the left ventricle. TEE, transesophageal echocardiography.

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Fig 2. Intracardiac thrombus removed after cardiotomy.

continually produced during cardiopulmonary bypass is only partially suppressed by heparin.[4] Lupus anticoagulant tests were positive after surgery, but the patient did not have a history of lupus or thrombosis. The patient was referred to rheumatology for follow-up.

Conflict of Interest

None.

Supplementary materials

Supplementary material associated with this article can be found in the online version at doi:10.1053/j.jvca.2022.12.020.

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https://doi.org/10.1053/j.jvca.2022.12.020