Massive multi-chamber heart thrombosis as a consequence of acute fulminant myocarditis complicated with fatal ischaemic stroke

Mustafa Tank Ağac, Ali Rıza Akyüz, Zeydin Acar, Hakan Erkan, and Bülent Vatan

1Cardiology Department, Ahi Evren Heart and Vascular Surgery Training and Research Hospital, Çamlık Street, 61187, Trabzon, Turkey and 2Cardiology Department, Sakarya Training and Research Hospital, Adnan Menderes Street, 54100, Sakarya, Turkey

A previously healthy 22-year-old was admitted to our hospital with cardiac decompensation after a flu-like disease 2 weeks earlier. The ECG displayed negative T-waves in anterior precordial leads, and his troponin T level was 1.51 mg/L. Echocardiography revealed a severely hypokinetic left ventricle (LV) and multiple thrombi in all heart chambers (Figure 1; Panel A, Panel B, Panel C, Panel D) (Supplementary data online, Videos 1 and 2). The patient was hospitalized with diagnosis of acute fulminant myocarditis. Supportive therapy with heart failure medications and unfractionated heparin were started. Because of risk of massive thromboembolism, urgent surgical intervention was discussed, but surgical team deferred the operation due to possible need for LV assist device which was not available at that time. A week after admission the patient’s general condition was good and echocardiography revealed that thrombi in right and LV apices were reduced, but there was a highly mobile thrombus in LV appendix (Supplementary data online, Video 3). Upon attainment of assist device, the patient was scheduled for surgery for the following day. Unfortunately he was lost due to cerebral embolism in the night before surgery.

The management of patients with fulminant myocarditis is supportive medical care with heart failure medications until cardiac compensation ensues. Unfractionated heparin can be given if it is complicated with intracardiac thrombus. The role of surgery for primary embolic prevention in myocarditis with intracardiac thrombus is controversial. In the present case, although we had not had a chance to report the result of surgery because of an unfortunate death, we think that many gaps concerning the optimal medical management of myocarditis still exist.

Supplementary data are available at European Journal of Echocardiography online.

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