

**A case of refractory right ventricular infarction with stent occlusion that could not be saved**

Yutaro Kasai<sup>1</sup>, Tamaki Suyama<sup>1</sup>, Tomoyuki Tani<sup>1</sup>, Kazumasa Yamasaki<sup>1</sup>, Kenichi Matsutani<sup>1</sup>, Hiroki Bouta<sup>1</sup>, Yuki Katagiri<sup>1</sup>, Yuichiro Hosoi<sup>1</sup>, Ken Kuroda<sup>1</sup>, Kohei Ishikawa<sup>1</sup>, Mamoru Miyazaki<sup>1</sup>

<sup>1</sup>Cardiology, Sapporo Higashi Tokushukai Hospital, Japan

The patient was a 73-year-old man. He presented to the hospital with sudden chest pain while playing tennis. On arrival, his vital signs were as follows: pulse rate 45 beats per minute, blood pressure 89/61 mmHg, respiratory rate 16 breaths per minute, oxygen saturation 94% (3 L/min), and body temperature 35.5°C. Electrocardiogram revealed ST elevation in II, III, and aVF, complete right bundle branch block, and sinus node dysfunction. Echocardiography showed an ejection fraction (EF) of 40%, severe akinesis of the inferior wall and right ventricle, and inferior vena cava (IVC) dilation. Coronary angiography revealed #1: 100%, #9: 99%, #13: 100%, and #HL: 99%. Treatment was initiated using a 6Fr guiding system, and white thrombus was aspirated, followed by reperfusion. However, systolic blood pressure dropped to approximately 50 mmHg, and IABP was inserted via the right femoral artery. The patient was admitted to the ICU, but despite fluid resuscitation and vasopressors, hypotension persisted, and V-A ECMO was initiated via the left femoral artery. On the 8th day of hospitalization, blood pressure was stable, and V-A ECMO was discontinued. The next day, right heart failure worsened, and V-A ECMO was replaced with IABP. On the 15th day of hospitalization, a large thrombus was detected within the V-A ECMO circuit, and the V-A ECMO was replaced from the opposite side. On the 20th day of hospitalization, improvement in Swann-Ganz test values was noted, and no blood pressure drop was observed during the clamp test, leading to removal of the PCPS via ParClose Post Closure. However, subsequent blood pressure drop occurred, necessitating reinsertion of the V-A ECMO and endotracheal intubation. On the 24th day of hospitalization, angiography revealed stent occlusion in the right coronary artery. Re-treatment with DCB was performed, but subsequent increases in vasopressors made V-A ECMO removal difficult. CHDF was initiated on the 29th day of hospitalization, but death was confirmed on the 40th day of hospitalization.