

Outcome after a prolonged resuscitation attempt

Mechanical complication of an infarct or of its treatment?

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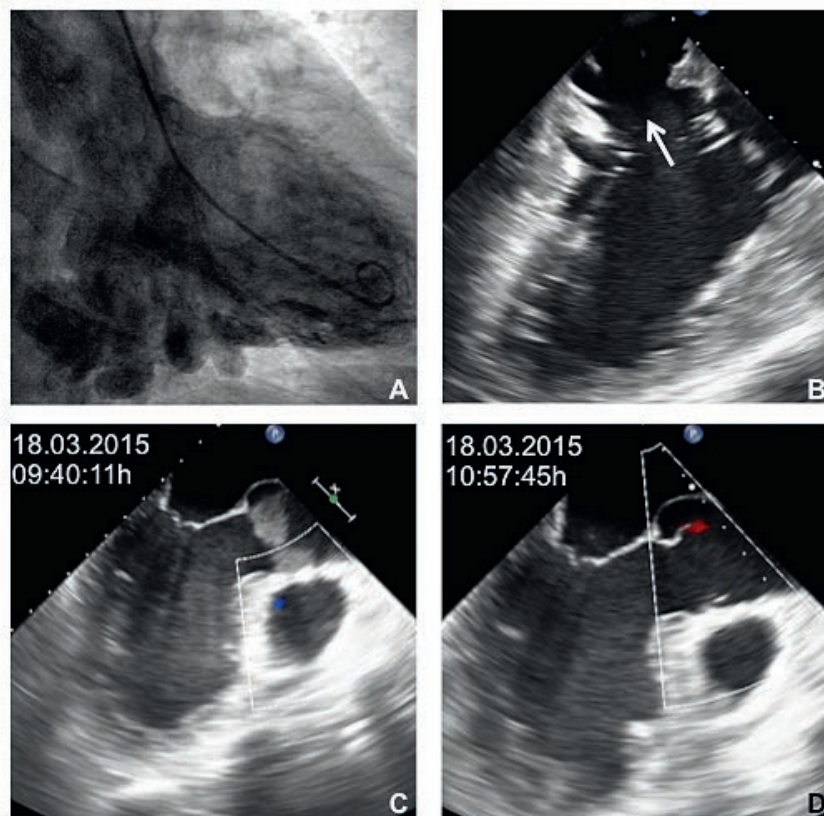


Figure 1: Description see text.

At 05:30 in the morning, a 51-year-old male patient in cardiogenic shock was admitted from an outside hospital. Four hours earlier, the patient had become symptomatic with epigastric pain, emesis and syncope, and suffered cardiorespiratory arrest. He had been resuscitated by his family prior to arrival of the emergency team. Professional resuscitation had been continued at the patient's home for another 45 minutes. Coronary angiography revealed three-vessel coronary artery disease with chronic total occlusions of the right coronary artery and the left circumflex coronary artery, as well as severe stenoses of the left anterior descending artery. Left ventricular (LV) ejection fraction was 20%. In the LV infero-basal region, a sacular structure was seen; its "neck" (→) measured >2 cm in diameter (fig. 1A, B). Initial differential diagnosis of this structure included, among others, LV pseudoaneurysm. Venoarterial extracorporeal membrane oxygenation (ECMO) was installed to treat the patient's cardiogenic shock. Heparin infusion

was started at 10:00. Transoesophageal echocardiography shortly after ECMO implantation revealed a permanently closed aortic valve with aortic root thrombosis (fig. 1C). At 10:00, 100 ml of sodium bicarbonate 8.4% was infused. At 10:57, the aortic valve was opening again, and the aortic root thrombosis had disappeared (fig. 1D). In the afternoon of the same day, the still shocked patient entered a myoclonic state. After interdisciplinary discussion, it was judged that neither surgical nor interventional therapy would alter the patient's outcome. The patient expired late in the evening of the same day. Final diagnosis was not a mechanical complication of the probably subacute myocardial infarction (rather a congenital LV aneurysm), nor of its treatment by ECMO with aortic root thrombosis, but extensive ischaemic brain injury in the context of prolonged resuscitation.

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