

Subacute Myocardial Infarction with On-Line Rupture

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Abstract

An old lady was admitted to our hospital with subacute myocardial infarction. We performed an echocardiogram, discovering a massive pericardial effusion, with documentation of heart rupture while taking the exam.

Case Report

A 89-year old lady was admitted to our hospital because of hypothermia and accidental fall. Body temperature at hospital arrival was 33.3°C. In the previous week she had experienced shoulders pain, vomiting and dizziness. Blood pressure in the emergency room was 110/70 mmHg and heart rate 95 bpm. On the ECG (A) there were minimal signs of acute myocardial ischemia but high sensitive troponin T was 3578 ng/L (n.v. < 0.14). She was therefore hospitalised in the cardiac intensive care unit.

Echocardiography at admission showed a mild reduction of left ventricle systolic function (EF 52%) with localised akynesia and thickness reduction of the middle segments of infero-lateral and lateral walls. A remarkable pericardial high density effusion was observed along the right heart free walls (ventricle and atrium). This effusion partially compressed the right sections (B) but did not appear to be tamponating. The lady was symptom-free and was treated with saline infusion in order to expand intravascular volume.

Three hours later a control echocardiography was performed and confirmed the previous observations. Suddenly the lady reported intensive chest pain and simultaneously the ST segment on surface ECG appeared markedly elevated (8 mm) in the inferior and all the anterior leads (C).

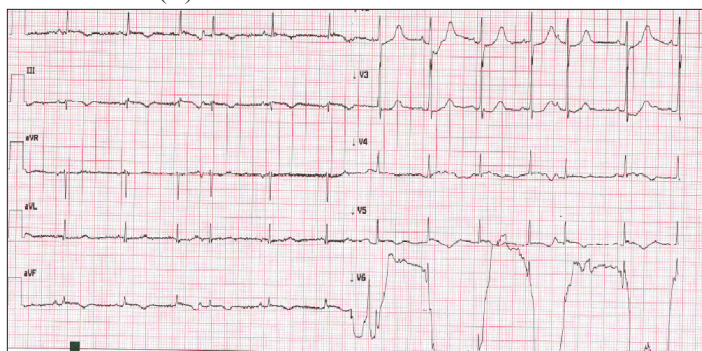


Figure A

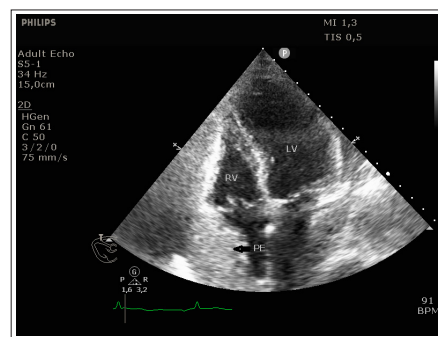


Figure B

LV: left ventricle
RV: right ventricle
PE: pericardial effusion

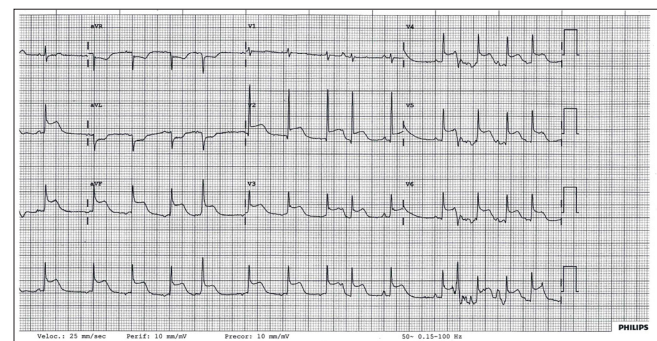


Figure C

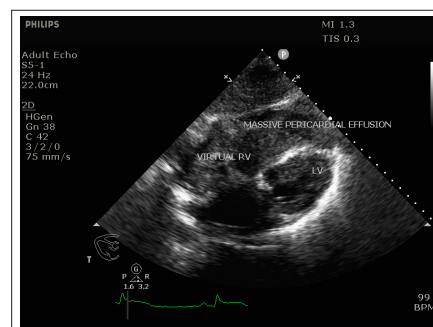


Figure D

RV: right ventricle
LV: left ventricle
PE: pericardial effusion

Shortly after the lady developed extreme hypotension and became sleepy. On echocardiography the pericardial effusion increased rapidly and compressed almost completely the right ventricle (D; video 1). Few minutes later the patient had respiratory arrest and subsequent cardiac arrest. Due to advanced age and co morbidities no resuscitation manoeuvres were performed.

Although the rupture of the myocardium occurs in only 2-4% of the cases of acute myocardial, it is associated with high mortality mainly due to cardiogenic shock [1,2]. It is often impossible to get an echocardiogram recorded to search for hemopericardium before the fatality occurs, but in this case it has been performed exactly during the fatal rupture [3].

References

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