

# Emergency Pericardiocentesis in Pacemaker Lead-induced Rt Ventricle Injury and Pericardial Effusion

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## ABSTRACT

Pericardial effusion due to rt ventricle<sup>1</sup> injury by pacemaker lead is a serious condition. In this condition, time is a very important factor, immediate echo and diagnosis are very important factors, and immediate pericardiocentesis is life-saving. We have done diagnosis and pericardiocentesis in 20 minutes in cath lab, and the patient becomes stable in cath lab only and discharged on the 4th day. This is teamwork, and emergency treatment by a doctor on duty is very important.

**Keywords:** Angioplasty, Complete heart block, Echocardiography and diagnosis, Myocardial infarction, Pacemaker insertion, Pericardiocentesis, Rt ventricle injury, Streptokinase injection.

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## CASE DESCRIPTION

A 78-year-old male patient with inferior wall myocardial infarction (MI) and complete heart block (CHB) presented in emergency immediate temporary pace maker insertion (TPI)<sup>2,3</sup> done, and streptokinase injection given in 1 hour. The patient was posted for angiography on next day. Angiography showed rt coronary artery 85% block for which angioplasty was done. On the next day, the patient was stable with his own heart rate of 80/minutes. TPI lead<sup>2</sup> was removed by cardiologist, and after 10 minutes of removal patient started complaining of breathing difficulty, and his heart rate was 145/minute and blood pressure 70/40 mm of Hg. I did immediate echocardiography, and on echo, there was a large pericardial collection.<sup>4</sup> Immediately, the patient shifted to the cath lab, and pericardiocentesis<sup>5</sup> was done, and on cath lab table patient heart rate settled to 65/minute and blood pressure 140/70 mm of Hg with no inotropic requirement. Patient high-resolution tomography (HCT) dropped to 24 from 42, so later, two units of blood were given, and the patient was discharged healthy on the 4th day.

## DISCUSSION

Myocardial infarction<sup>6</sup> leads to death and many complications for the patient. CHB, ventricular, tachycardia fibrillation, asystole renal failure, and so many complications are reported in post-MI. Presentation of case is inferior wall infarction and complete heart block. This temporary pacemaker insertion is life-saving; this should be done in cath lab under fluoroscopy that will prevent complications and confirm the position of the pacemaker lead in position at rt ventricle apex. In fresh MI, lean patients aged more than 80 years are the case of rt ventricle perforation reported in the book. Perforation of rt ventricle can happen any time during insertion removal or when the patient does some movement. Perforation may present as asymptomatic or tachycardia hypotension and shock heart failure; hence immediate diagnosis is life-saving. Apart from clinical presentation, X-ray chest and echocardiography is very important, and pericardiocentesis is

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life-saving, and time is life here hence do not waste time; we should act fast and do urgently that will save your patient.

Rt ventricle perforation can lead to cardiac tamponade and death. More common in emergency fresh MI age more than 80 years and the patient received streptokinase injection or on steroid use. In an asymptomatic case, on a CT scan, you can diagnose. Emergency echocardiography by senior consultant is very important, and immediate pericardiocentesis by an expert consultant is life-saving hence we should not waste time in diagnosis and pericardiocentesis. In some cases, you may require surgical closure in my institute; in the last 21 years, we have done 3000 TPI, and 10 cases perforation diagnosed in our hospital, five cases of surgical closure and bypass surgery done in our hospital, three cases of conservative management and two cases of pericardiocentesis done.

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