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### RESEARCH ARTICLE

#### ACUTE MYOCARDIAL INFARCTION WITH CONCOMITANT PULMONARY EMBOLISM.

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##### Key words:-

Myocardial Infarction, Pulmonary Embolism.

#### Abstract

Medical complications often worsen the prognosis after myocardial infarction. We report the case of a 48-year-old cigarette smoker with a 10-year history of hypertension, admitted in the emergency department with respiratory distress and global heart failure. Electrocardiography showed QS waves in anterior and lateral leads. Transthoracic echocardiography showed abnormal left ventricular contractility and a huge apical thrombus coating left ventricular lateral wall, with right ventricular dilatation. A computed tomographic pulmonary angiography revealed a pulmonary distal embolism. One week after admission, the patient presented a ventricular fibrillation stopped immediately after electrical shock. Vasopressor drugs were then introduced due to severe hypotension, and were successfully withdrawn two weeks later. On day 25, the patient suddenly presented extreme bradycardia followed by ventricular fibrillation then a cardiac arrest non responsive to cardiopulmonary resuscitation. Myocardial infarction complicated with pulmonary embolism, ventricular arrhythmia and cardiogenic shock at the same time is very rare. Prognosis of such cases is very poor.

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#### Introduction:-

Medical complications often worsen the prognosis after myocardial infarction. Simultaneous onset of pulmonary embolism has rarely been reported, it is associated with bad clinical outcome.

#### Case report :

A 48-year-old patient was admitted to emergency department with respiratory distress. In his Medical history we found hypertension for 10 years, heavy cigarette smoking and diabetes recently diagnosed during hospitalisation

He reported epigastric pain with sweating 15 days previously, for which he had received symptomatic treatment. Then the patient developed edema of the lower limbs and shortness of breath.

Cardiovascular examination at the admission found signs of global heart failure with audible crackles throughout both lung fields. Electrocardiography showed QS waves in anterior and lateral leads.

Transthoracic echocardiography showed abnormal left ventricular contractility and a huge apical thrombus coating left ventricular lateral wall, with right ventricular dilatation and increased right-side pressures.

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A computed tomographic pulmonary angiography revealed a pulmonary distal embolism. Ultrasonography did not show thrombus in either the iliac veins or the superficial femoral veins.

One week after admission, the patient presented ventricular fibrillation stopped immediately after electrical shock. Vasopressor drugs were then introduced due to severe hypotension.

An assay of tumor markers was performed ,as part of a hypercoagulability assessment, revealing an elevated CA125 level.

Over the next two weeks the patient was successfully withdrawn from vasopressor drugs. He also presented an urinary tract infection (*Raoultella ornithinolytica*) and a sepsis caused by peripheral venous catheter-related bloodstream infection (coagulase-negative staphylococcus), with pretty good evolution under teicoplanin, gentamicin and colistin

On day 25, the patient suddenly presented extreme bradycardia followed by ventricular fibrillation. Normal rythm was restored by electrical shocking, but the patient had a cardiac arrest soon after. Cardiopulmonary resuscitation was attempted for long duration with no response.

### **Discussion:-**

Simultaneous onset of myocardial infarction and pulmonary embolism has rarely been reported.

The rarity of the case impelled further investigation for hypercoagulability, including an assay of tumor markers revealing an elevated CA125 level. However, a high-level of CA125 has been reported in many diseases other than carcinoma. A study published in the CHEST journal on april 2016 concluded that CA125 level was correlated to pulmonary embolism severity<sup>1</sup>.

The prognosis of this patient was worsened by multicomplcated myocardial infarction concomitant with pulmonary embolism.

Optimal management would have been implantation of cardioverter defibrillator for the prevention of sudden cardiac death according to 2015 ESC guidelines (recommendation class I level A) <sup>2</sup>.

### **Conclusion:-**

AMI complicated with rhythm disorder and cardiogenic shock, associated to pulmonary embolism is very rare. Such cases are often of bad prognosis.

### **References:-**

1. Li Xu et al. Serum CA125 Level in Patients With Acute Pulmonary Thromboembolism. Chest Journal. April 2016; 149(4):A517.
2. S. Priori et al. 2015 ESC Guidelines for the managementof patients with ventricular arrhythmiasand the prevention of sudden cardiac death. European Heart Journal. 2015; 36: 2793–867.