

Case Report

Acute pancreatitis with uncommon presentation of myocardial infarction

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Abstract

Acute pancreatitis is inflammation of the pancreas that may be accompanied by a systemic inflammatory response which results in impairment of the functioning of various organs, systems. Pancreatitis associated vascular complications very often cause morbidity and mortality. There are various cardiovascular complications like shock, hypovolemia, pericardial effusion, and sometimes ST-T changes in the electrocardiogram (ECG) presenting as acute myocardial infarction (AMI). Acute myocardial infarction complicating acute pancreatitis has rarely been studied and the exact process of myocardial injury still remains unclear. We here report a case of Acute Pancreatitis associated with acute myocardial Infarction.

Introduction

The inflammation of pancreas is termed as pancreatitis. In case of acute pancreatitis, patient complains of pain in the upper abdomen mainly located in the epigastric region. The other symptoms presenting are- nausea, vomiting and associated with increased levels of enzymatic markers like amylase and lipase. Pancreatitis causes vascular complications that are a marker of increased chance of morbidity and mortality due to arterial erosion and sometimes formation of pseudo-aneurysms. Vascular complications also include-ischemic complications & venous or sometimes arterial complications (splanchnic thrombosis and possible varices) [1,2]. It is difficult to diagnose and treat ST elevated myocardial infarction (STEMI) associated with acute pancreatitis. ECG showing changes presenting as acute myocardial ischemia are observed in few intra-abdominal situations that includes acute pancreatitis [2].

Case report

A 59 year male presented to our hospital in January 2020 with complaint of severe epigastric pain radiating to back & shortness of breath for the past 3 days. There is no history of abdominal distension, pedal edema, melena, jaundice, bilious vomiting. Also there is no associated co-morbidity or significant history of drugs. He was chronic alcoholic dependent and smoker since 15 years. On examination patient was conscious, oriented to time, place and person. Haemodynamically blood pressure of 98/58 mmhg, pulse of 142/min and afebrile. He was maintaining oxygen saturation of 90% on room air without oxygen supplement.

More Information

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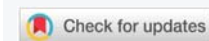
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There were no signs of pallor, icterus, cyanosis, clubbing, lymphadenopathy, and edema. The abdominal examination showed diffuse tenderness without any guarding or rigidity. His investigations revealed Hb-11.8 g/dl, TLC-16,800/mm³, Platelets-97,000/mm³, Mildly deranged liver function test seen (SGPT-88, SGOT-64), Sodium- 140meq/l, Potassium-3.4 meq/l, normal renal function test, Serum amylase was 8000 U/L and Serum Lipase was 8800 U/L. CECT upper abdomen was indicative of acute interstitial pancreatitis. ECG showed Right bundle branch block (RBBB) pattern. His Troponin I was 7.02ng/ml (normal- 0.04 ng/ml). ECG indicated regional wall motion abnormality and dilated left ventricle with ejection fraction of 20% - 25%. Hence diagnosis of acute pancreatitis (non-necrotizing) with acute myocardial infarction was made. Low molecular weight heparin with supportive treatment was administered to the patient. On Repeat ECG after 48 hours showed persistent RBBB pattern. Though patient showed marked improvement with the treatment and was later discharged after 5 days of medical management.

Discussion

Acute onset of pancreatitis is due to inflammation of pancreas mainly associated with alcohol intake and



occurrence of gall stones. Acute pancreatitis most commonly presents as a sudden onset acute abdominal pain which is vague and with time increases in severity and intensity. Pain is commonly located in the epigastric region. The distribution of pain can be sometimes reported on the either side-left or right as it depends upon the part of the gland inflamed. The pain very often radiates to back [1-4]. Acute pancreatitis with associated complication of acute myocardial infarction has been observed and exact process of myocardial injury still remains unclear. The hypothesized associations of myocardial injury and acute pancreatitis includes the following:

- (A) Vagal mediated reflexes (cardio biliary reflex)
- (B) Metabolic & electrolytic disturbances
- (C) The toxic effects of pancreatic enzymes on myocardial tissue
- (D) Coronary artery spasm
- (E) Hemodynamic instability-either shock or sepsis

In conditions of cardiovascular events- ST segment elevation rarely occurs. ECG changes like arrhythmia, conduction abnormalities, duration changes in T wave & QT period have been commonly reported. Complications associated with acute myocardial infarction have been rarely observed and accounted [5]. Abnormalities in the Electrocardiogram depicting as acute myocardial infarction in patients associated with acute pancreatitis has been reported. Sometimes reports of pseudo myocardial infarction-cardiac enzymes, ECG, coronary angiography findings are normal, which is in contrast to an ST-T change representing acute myocardial infarction. The reports of acute pancreatitis patients presenting with true complicated myocardial

infarction are very scarce [5]. In the present case, patient and his guardians denied us the permission to conduct coronary angiograph. However the Troponin I levels were totally suggestive of acute myocardial insult. The patient in our case presented with persistent ECG changes even after medical management that is suggestive of STEMI.

Conclusion

So here we would like to conclude that major vascular complications associated with acute pancreatitis need urgent attention and should be dealt as a life threatening condition. Coincidental symptoms of acute pancreatitis & myocardial infarction often pose as challenges in diagnosis for the attending doctors. The treatment includes the choice of revascularization therapy. The physician has to keep in mind about the use of safer antiplatelet drugs & anticoagulant therapy.

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