Kounis Syndrome: A Rare ST Elevation Myocardial Infarction After Wasp Sting

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ABSTRACT

The Kounis syndrome is described as an acute coronary syndrome after hymenoptera stings or exposure to environmental toxin or drugs. The allergic reaction induced by hymenoptera stings seems to have triggered inflammatory mediators release and thus induced acute coronary syndrome. We report a case of a 67-year-old male patient who had a inferolateral ST-elevation myocardial infarction following multiple wasp stings.

The patient was present to emergency room with pain throughout the body without typical chest pain of myocardial infarction after being stung by wasps on the face, neck, and both hands. Patient has no previous cardiac illness or any other comorbiditis. Within an hours, patient are anxious and sweaty with hemodynamic instability. The electrocardiogram (ECG) showed inferior ST-elevation myocardial infarction (II, III, AvF) with VES bigemini. In few minutes, the patient was respiratory and cardiac arrest so intubation and cardio-pulmonary resuscitation (CPR) are performed. The patient was return of spontaneous circulation (ROSC) after 20 minutes CPR with ECG showed inferolateral ST-elevation myocardial infarction (II, III, AvF, V4-V6).

The patient was given antithrombotic agents, but 20 minutes later the patient had cardiac arrest again and CPR are performed. The patient had ROSC for 10 minutes after CPR. Unfortunately, the patient had cardiac arrest again and was declared dead. This study was aimed to present this case report to highlight this rare syndrome which physicians should be aware of such complication to make a prompt diagnosis and initiate early treatment.

Keywords: Kounis syndrome, hymenoptera, wasp sting, acute myocardial infarction

ST Elevation Myocardial Infarction in Young Adult Male with Chronic Kidney Disease with Normal Coroner : Myocardial Infarction with Non-Obstructed Coronary Arteries?

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ABSTRACT

Myocardial Infarction (MI) can occur in the absence of obstructive (>50% stenosis) Coronary Artery Disease (CAD). Myocardial Infarction with Non-Obstructed Coronary Arteries (MINOCA) is a rare condition with prevalence ranging from 1-14% of all MI. MINOCA can caused by different etiological entities, so identifying the underlying cause is essential to optimize therapy.

A male, 34 years old, was admitted to public district Hospital suffering hypotension due to profuse vomiting related uremic syndrome. Patient's comorbidities are chronic kidney disease stage V caused by obstructive uropathy since November 2018, but not routinely hemodialyzed, and recurrent uric renal stone. During 2 days hospitalization, the patient was suffering from typical chest pain, then patient was diagnosed with STEMI inferior lateral and immediately referred to Emergency department of Sardjito Hospital. In Emergency Department Sardjito Hospital, hs-Troponin I reached >40.000ng/dL, ECG showed ST elevation in inferior lateral leads. Patient underwent fibrinolysis using Alteplase with successful outcome, then admitted to Intensive Care for observation. On day 2 in Intensive Care, patient underwent Coronary angiography for evaluation, the result was normocoroner. Further investigation is needed to seek the etiological cause of MINOCA. Echocardiography showed dilated all chamber with regional wall motion abnormality. Other diagnostic modalities planned in outpatient setting. Then patient was discharged with dual anti platelet therapy.

This case fulfilled the MINOCA criteria, so further diagnostic modalities needed after coronary angiography to seek etiologic cause of MINOCA to tailor the therapy.

Keywords: MI, MINOCA, STEMI, normocoroner

Wellens' Syndrome, A Warning Sign of Critical Left Anterior Descending Artery Stenosis: A Case Report

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ABSTRACT

Introduction: Wellens' Syndrome is a pattern of electrocardiographic (ECG) T-wave changes in precordial leads associated with critical stenosis of proximal left anterior descending (LAD) coronary artery. This syndrome continues to be an important warning sign for the clinician as delay in urgent angiography and intervention can result in extensive anterior myocardial infarction, left ventricular dysfunction, arrhythmias, and death.

Case Presentation: A 50-year-old woman presented with intermittent chest pain lasting for 3 days. The chest pain was described as pressure in the left chest, exertional onset, radiated to left arm, associated with shortness of breath and diaphoresis, lasting for about 20 minutes, and resolved with rest. Her risk factor was hypertension. She was asymptomatic and physical examination was normal during our emergency department evaluation. Troponin T was slightly elevated. ECG pattern evolved from Wellens' syndrome type A into type B during the hospitalization. The patient was transferred to PCI-capable hospital for cardiac catheterization. Coronary angiography revealed 90% stenosis of mid LAD. The patient was treated with drug eluting stent.

Discussion: ECG findings in Wellens' syndrome are classified into type A (biphasic T waves) or type B (deep inverted T waves). These findings can be seen in precordial leads, especially V2 and V3. The T-wave changes typically occur during a chest pain-free interval, represent stunning and reperfusion of the myocardium. Despite that the ECG changes in our patient were consistent with Wellens' syndrome, the critical stenosis was found to be in the mid rather than the proximal part of LAD.

Conclusion: Clinicians should be aware of Wellens' syndrome because the patient is at high risk for impending extensive anterior acute myocardial infarction. Once diagnosed, the patient should undergo coronary angiography and revascularization therapy.

Keywords: Wellens' syndrome, Critical stenosis, Left anterior descending artery

Recovery of Total Atrioventricular Block in Acute Inferior Wall Myocardial Infarction after Fibrinolysis in Uncapable Cathlab Hospital Vanishing a Need of Cardiac Pacemaker Implantation : A Case Report

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Background

Atrioventricular block are common complications of acute myocardial infarction (AMI) involving the inferior wall, in which pacemaker implantation and revascularization are needed because of high mortality rate.

Case

A 77 year old man came to the emergency room complained of having epigastric pain since 4 hours before, and black out while standing up. Blood pressure was 130/59, Respiratory rate was 21, Pulse was 43 beat per minutes. The ECG showed ST segment elevation in lead II, III and avF with total atrioventricular block. The patient was treated with Streptokinase (because uncapable of cathlab), dual anti platelet, and atorvastatin 40 mg followed with unfractionated heparin. In 24 hours, ECG showed improvement became Mobitz 1 AV block and back to normal sinus rhythm in 72 hours without pacemaker implantation and patient was discharged at day 7 in stable condition.

Discussion

Inferior Wall AMI mostly occurs due to obstruction of the blood supply in the right coronary artery and usually complicated by conduction abnormalities due to vagal tone leading initial sinus bradycardia progressing to complete heart block. This condition is indicated for revascularization and implantation of pacemaker, which is PTCA is preferred rather than fibrinlolytic agent administration. But if the cathlab cannot be reached in 2 hours, Fibrinoytic drugs can be chosen, and the complications, like atriovantricular block can be solved by revascularization immediately. Based on the hemodynamic still compromised and there is no cathlab in the hospital, pacemaker implantation cannot be performed in this patient. Immediately after fibrinolysis, less then 24 hours, pain was gone, elevation of ST-T segment was reduced and ecg showed improvement and back to normal at 3rd day.

Conclusions

Revascularitaion immediately which open blockade vascular in AMI patient, either by PTCA or fibrinolysis, is the most important thing to do. In uncapable cathlab hospital, fibrinolysis can be chosen as a treatment even without pacemaker implantation. Because over the time of successfull revascularizatoon, the complication like av block can be disminished even without pacemaker implantation.

Keyword: Inferior Wall Myocardial Infarction, Atrioventricular Block, Fibrinolysis

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Secondary Polycythemia in Eisenmenger Syndrome, is phlebotomy necessary ? A case report

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Introduction

Secondary polycythemia of cyanotic congenital heart disease (CCHD) is clinically different from primary erythrocytosis of polycythemia vera (PV). There is still debatable whether it is necessary to do phlebotomy for secondary polycythemia especially in congenital heart disease. We report the case of secondary polycythemia due to Eisenmenger syndrome. The purpose of this case report is to illustrate the clinical consideration of management secondary erythrocytosis in congenital heart disease especially regarding phlebotomy.

Case illustration

An 42 years old male presented with complain of dyspnea and difficulty of speaking since two hours before admission. Physical examination revealed that there are cyanosis, clubbing fingers, cardiomegaly and positive pathological reflexes. Multiaxial head CT scan was done and confirmed hyperatenuation of cerebral artery considering polycythemia or hypoxia. Patient was referred to cardiologist and echocardiography was done. The results of echocardiography were large VSD with bidirectional shunt dominant Right to Left, pulmonary hypertension and low LVEF with dilatation and global hypokinetic. Complete blood count (CBC) was hemoglobin 22,1 g/dl and hematocrit 67,4%. This patient was diagnosed as ischemic stroke, Eisenmenger Syndrome due to VSD with secondary polycythemia. Rehydration as first line therapy was done because manifestation of hypercoagulation has occurred as patients had a stroke but there was increase shortness of breath and bilateral leg edema. Rehydration was stopped and evaluation of CBC was hemoglobin 22,7 g/dl and hematocrit 66,1%. Due to increase in hematocrit more than 65, phlebotomy 300 cc was done to the patient. Evaluation of CBC after phlebotomy was hemoglobin 21,6 and hematocrit 62,3%. Patient's condition was improved and could be discharged from hospital.

Conclusion

Phlebotomy was not the first line management of secondary polycythemia, it could be done when rehydration failed to manage the symptom of the hypercoagulation of the patient and hematocrit level more than 65%.

Keywords: Secondary polycythemia, Eisenmenger Syndrome, Phlebotomy