

Kounis Syndrome in a 40 Year Old Healthy Male Following Bee Sting: Case Report

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Abstract: Kounis syndrome is a group of symptoms that manifests as unstable vasospastic or nonvasospastic angina and even as acute myocardial infarction and is triggered by the release of inflammatory mediators following an allergic insult. Allergic angina and allergic myocardial infarction is a ubiquitous disease covering a wide spectrum of mast cell activation disorders which are associated with acute coronary syndromes and are referred to as "Kounis syndrome" in the medical literature. Our case presented to an emergency room with history of bee sting two hours back with history of chest pain since 30 min. We report this case due to rarity in bee sting cases.

Keywords: Kounis syndrome, vasospastic, allergic myocardial infarction

INTRODUCTION

Kounis syndrome" was first described in 1991 by Kounis and Zafras. It is also known as "allergic angina syndrome" or "allergic myocardial infarction"[1]. This was first reported in the American Heart Journal in 1950 with a case of a prolonged allergic reaction to penicillin [2]. The aim of presenting this case report is to highlight this rare syndrome. Physicians should be aware of such a complication to make a prompt diagnosis and initiate an early treatment.

CASE REPORT

A 40-year-old man presented to the emergency department with severe chest pain following a bee sting.

The patient was not a known smoker or alcoholic. There was no history of allergy, bronchial asthma or any previous surgeries. His functional capacity was 7 metabolic equivalents. Systemic examination was normal. All investigations, including kidney function, haemogram, urine, random blood sugar, cardiac biomarkers and chest X-ray, were within normal limits. Electrocardiography (ECG) showed ST-segment elevation in leads II, III and avF. An ST-segment elevation myocardial infarction (STEMI) of inferior wall was diagnosed and, following primary management, the patient was immediately shifted to the intensive care unit and cardiology consultation was sought.

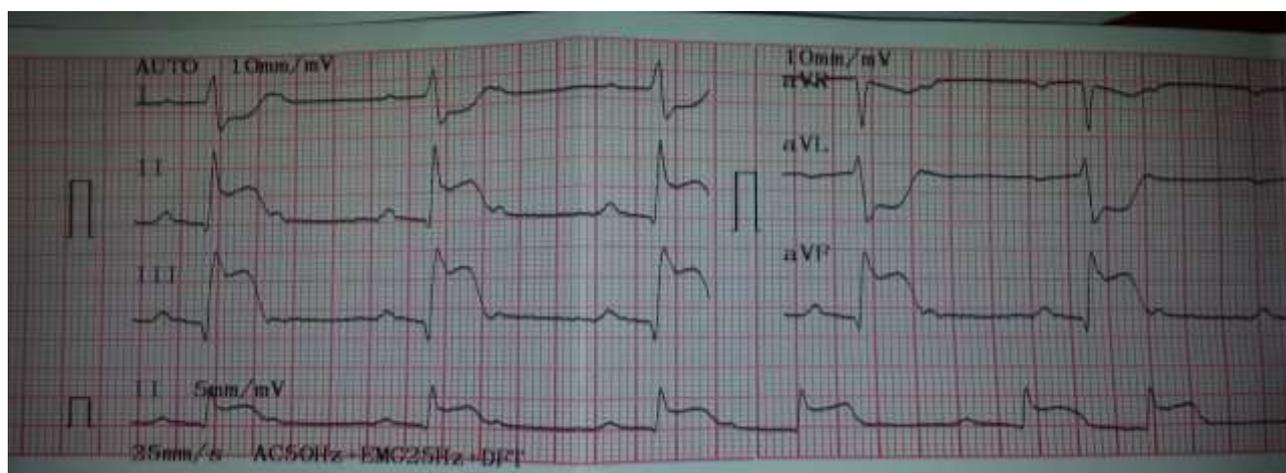


Fig. 1: ECG showing ST-segment elevation in leads II, III and avF

DISCUSSION

Kounis syndrome is defined as "the coincidental occurrence of chest pain and allergic reactions accompanied by clinical and laboratory findings of classic angina pectoris caused by inflammatory mediators released during the allergic insult"[3]. The pathophysiology in Kounis syndrome is coronary artery vasospasm due to the release of vasoactive mediators secondary to mast cell degranulation [4].

Kounis syndrome is divided into two subtypes: Type I is the occurrence of chest pain during an acute allergic reaction in patients without predisposing factors for coronary artery disease. Type II is the occurrence of chest pain in patients with angiographic evidence of coronary artery disease during an acute allergic reaction [5, 6]. The clinical presentation of KS includes a mixture of symptoms and signs of an allergic reaction and acute coronary syndrome, with chest pain, faintness, dyspnea, nausea, vomiting, syncope, urticaria, pruritus, diaphoresis, palpitations, pallor, hypotension, bradycardia etc. [7].

The multifactorial aetiology of Kounis Syndrome usually mandates a very detailed and careful clinical evaluation. We asked for any history of atopy, bronchial asthma and nasal polyp from the patient. Even the previous medical records were checked for any possible drug hypersensitivity and intolerance that patient was not aware of. The patient also denied any previous episode of coronary artery disease.

The use of corticosteroids in patients with vasospastic angina with evidence of allergy or the presence of symptoms refractory to high-dose vasodilators has been reported to resolve symptoms[8].

Our case fits into KS type 1 diagnosed based on history and clinical evaluation. Angiogram was not done due to financial constraints.

CONCLUSION

Myocardial Infarction with elevated ST-Segment is a rare complication of anaphylactic reactions due to bee sting and similar cases have been reported before. We recommend that ECG be done in all patients developing hypersensitivity reactions. In case a previously normal patient develops acute coronary spasm, all possible causes of allergy should be looked for.

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