KOUNIS SYNDROME: ACUTE MYOCARDIAL INFARCTION FOLLOWING MULTIPLE HORNET STINGS

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Introduction

Kounis syndrome, an acute coronary syndrome triggered by allergies, affects around 3.4% of allergy patients seen in emergency departments.

Case description

A 78-year-old gentleman, a smoker with underlying hypertension, presented to our facility experiencing dyspnoea and compressive chest pain following multiple hornet stings on his left arm. Upon assessment, he was conscious and alert, with a pulse rate of 50 beats/min, blood pressure of 54/41 mmHg, respiratory rate of 16 per minute, and oxygen saturation of 98% on room air. Lung examination revealed clear sounds, and no murmurs were detected. His 12-lead electrocardiogram (ECG) exhibited ST elevation in inferior leads with reciprocal changes and signs of right ventricular involvement. Elevated cardiac enzymes were noted, including a creatine kinase level of 1324 U/L, aspartate aminotransferase (AST) of 198 U/L, and lactate dehydrogenase (LDH) of 407 U/L. The initial treatment included adrenaline (0.5mg IM), hydrocortisone (200mg IV), chlorphenamine (10mg IV), and fentanyl (50mcg IV). Despite these interventions, the patient's chest pain persisted, necessitating thrombolysis. Following consultation with a cardiologist, anti-anginal medications were maintained, taking into account the patient's risk factors for coronary artery disease.

Discussion

Kounis syndrome manifests as an acute coronary syndrome triggered by allergic reactions, occurring in three types: type 1 in patients with normal coronary arteries, type 2 in those with pre-existing coronary atherovascular disease, and type 3 following stent implantation, all linked to mast cell activation. Diagnosis relies on clinical signs, laboratory findings, ECG, echocardiogram, and coronary angiography, though these resources may be limited in district hospitals. Management poses challenges as it necessitates revascularization alongside addressing anaphylactic reactions. In our case, the patient presented with angina and ST-T changes on ECG, with markedly elevated cardiac enzymes, warranting a diagnosis of acute STEMI. Corticosteroids and antihistamines can mitigate inflammation, but caution is advised with epinephrine use due to its potential to exacerbate ischemia.

Conclusion

The prognosis of Kounis syndrome is generally favorable. Hence, early recognition of this syndrome is crucial, relying on clinical signs, ECG changes, and laboratory findings, despite coronary angiography being the gold standard test.

Keyword: Kounis syndrome, allergic