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An unusual etiology of Kounis syndrome; warble fly

Dear Editor

We would like to report a case of Kounis syndrome which we diagnosed recently. Kounis syndrome is defined as the coexistence of acute coronary syndrome with allergic reaction.¹ Kounis and Zavras described the condition as allergic angina syndrome on 1991.¹ Braunwald suggested that histamines and leukotriens may cause coronary spasm.² Drugs (eg: antibiotics, analgesics, contrast agents etc.), foods, bee sting and latex exposure are among the pathogenic insults.^{3–5} Three types have been described for now. In type 1 Kounis syndrome, patients have normal coronary arteries and they have no coronary risk factors. In type 2, there is underlying coronary artery disease. In type 3, stent thrombosis is the main pathologic condition. In this report we presented a patient who developed type 2 Kounis syndrome after warble fly bite (*Hypoderma lineatum*).⁶

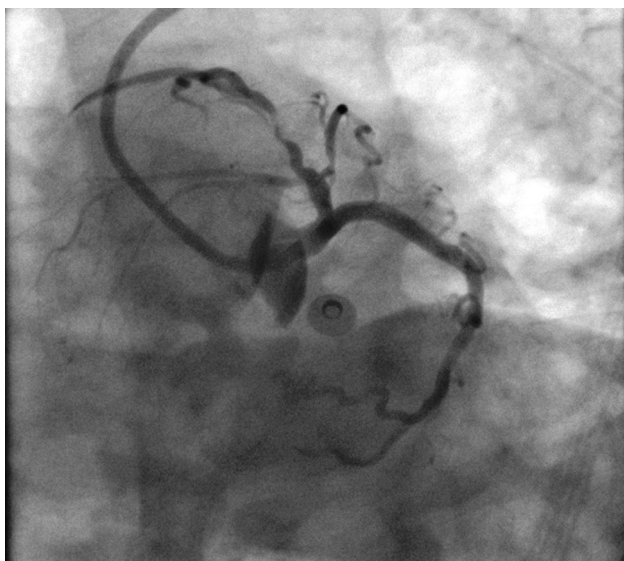


Fig. 1 – Left coronary system of the patient during coronary angiography.

Fifty-nine years old patient developed dyspnea, nausea and chest pain after warble fly (*H. lineatum*) bite. He was admitted to another center with these complaints. By the diagnosis of allergic reaction intravenous steroid and anti-histaminic treatment were given to patient. Although the dyspnea was diminished after treatment, chest pain persisted. The ECG revealed ST segment elevation in anterior leads. The patient was referred to our clinic with diagnosis of acute anterior myocardial infarction. After admission of patient, coronary angiography was performed which demonstrated critical lesion at left anterior descending artery (Fig. 1). Successful stent deployment was performed with TIMI 3 antegrade flow. There was no any problem on first month visit.

Etiology of Kounis syndrome involves many pathogenic insults and we presented an unusual case of Kounis syndrome due to warble fly (*H. lineatum*) bite. Warble flies generally live on cattles as a parasite and thus they are generally seen in rural areas. Beside showing warble fly as pathogenic insult in Kounis syndrome, this case is also important to emphasize the importance of an ECG in a patient with allergic symptoms, especially in whom anginal symptoms are present.

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Relationship of high-sensitive C-reactive protein with cardiovascular risk factors, clinical presentation and angiographic profile in patients with acute coronary syndrome: An Indian perspective

Dear Editor

We would like to report our research findings about hs CRP and its correlation with conventional risk factors and angiographic severity of CAD among patients of acute coronary syndromes.

1. Introduction

Worldwide, atherosclerotic cardiovascular disease (CVD) including coronary artery disease (CAD) is estimated to be the leading cause of death and loss of disability-adjusted life years. Unfortunately, while the incidence and prevalence of CVD is now declining in the developed countries, it continues to increase exponentially in the developing nations. Reddy reported that from 1970 to 2015, mortality from CVD was projected to almost double in the developing countries while it was projected to decline during the same period in the developed nations.¹ The Global Burden of Diseases (GBD) study reported the estimated mortality from CAD in India to be roughly 1.6 million in the year 2000.²

Several modifiable and non-modifiable risk factors have been identified to cause CVD. The major modifiable risk factors include hypertension (HTN), diabetes (DM), smoking and hyperlipidemia and whereas non-modifiable risk factors include age, gender and family history of premature CAD. However, not all coronary events can be predicted by these risk factors. In particular, nearly half of all myocardial infarctions or stroke occurs among individuals without hyperlipidemia. Consequently, alternate risk assessment approaches are being explored to facilitate early and accurate identification of individuals at risk of having CVD. Since atherosclerosis is an inflammatory process, several markers of inflammation have been evaluated for this purpose. Among them, high-sensitive C-reactive protein (hs-CRP) has emerged as the most important CV risk marker. More than a simple marker of inflammation, hs-CRP may influence vascular vulnerability directly through several mechanisms including,

enhanced expression of adhesive molecules, reduced nitric oxide, increased expression of endothelial PAI-1 and altered LDL uptake by macrophages. A scientific statement issued by Centre for Disease Control (CDC) and American Heart Association (AHA) has mentioned hs-CRP as the only inflammatory marker that can be used for risk prediction both for primary and secondary prevention of cardiovascular events.³ However, very limited information is available about the relationship between various CV risk factors and hs-CRP levels and the significance of elevated hs-CRP in Indian patients, who as compared to the western populations have vast differences in CVD epidemiology. Therefore, this study was sought to assess the relationship between the levels of hs-CRP and clinical profile, CV risk factors and the coronary angiographic findings in Indian patients presenting with acute coronary syndrome (ACS).

2. Material and methods

This cross-sectional study was conducted at a tertiary care center in North India. All consecutive patients who presented with ACS over a period of two years and who consented to be included in the study were enrolled. The study eligibility of every participant was determined by the principal author, a Consultant in Cardiology, who was also responsible for the final adjudication of the diagnosis of ACS. The study protocol was approved by the Intuitional Research and Ethical Committee.

2.1. Inclusion criteria

As mentioned above, all consecutive patients with ACS including unstable angina (UA), non-ST elevation myocardial infarction (NSTEMI) and ST elevation myocardial infarction (STEMI) were enrolled in to the study. UA was diagnosed if the patient had at least one of the following- angina chest discomfort at rest lasting for ≥ 20 min, recent onset (less than one month) angina of sufficient severity or exertional angina with a crescendo pattern, along with either ST segment