




Case report: Kounis syndrome type I – female patient presented with ventricular bigeminy and chest pain after bee sting

 **Lucija Schneider***,
 **Dražen Zekanović**,
 **Marin Bištirlić**,
 **Mihovil Santini**

Zadar General Hospital, Zadar,
Croatia

KEYWORDS: syndrome, angioedema, ventricular bigeminy, acute coronary syndrome.

CITATION: *Cardiol Croat.* 2024;19(11-12):588. | <https://doi.org/10.15836/ccar2024.588>

***ADDRESS FOR CORRESPONDENCE:** Lucija Schneider, Opća bolnica Zadar, Bože Peričića 5, HR-23000, Croatia. /
Phone: +385-99-4323-340 / E-mail: lucijaschneider@yahoo.com

ORCID: Lucija Schneider, <https://orcid.org/0009-0002-6181-3577> • Dražen Zekanović, <https://orcid.org/0000-0002-8147-6574>
Marin Bištirlić, <https://orcid.org/0000-0002-9213-4174> • Mihovil Santini, <https://orcid.org/0000-0002-1428-4484>

Introduction: Kounis syndrome is defined as cardiovascular symptoms or acute coronary events that occur secondary to an allergic or anaphylactoid reaction caused by inflammatory mediators released mostly from activated mast cells¹. There are 3 types of Kounis syndrome: spasm of coronary artery (type 1), atheromatous plaque rupture/erosion (type 2), and stent thrombosis (type 3).²

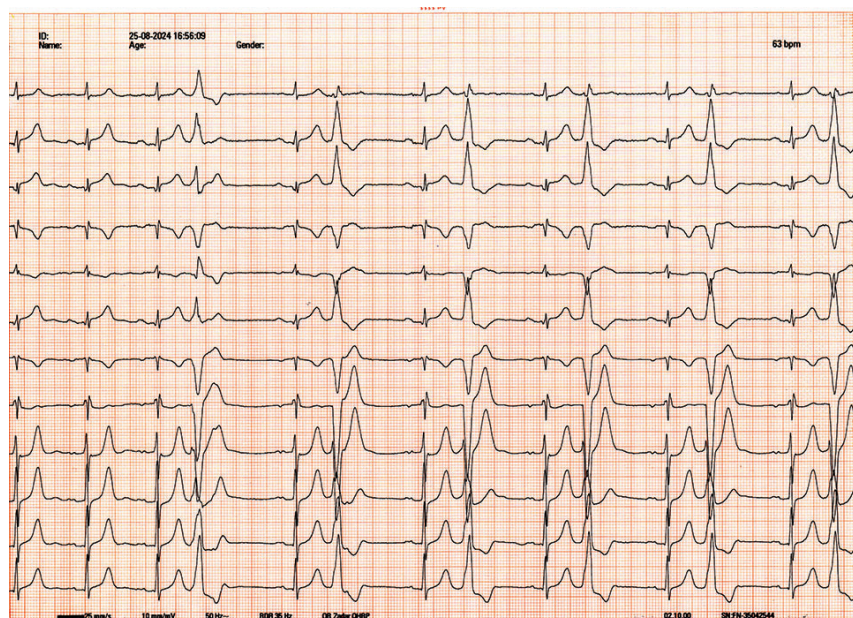


FIGURE 1. 12-lead electrocardiogram showing sinus rhythm, 70 beats per minute, with a discrete elevation in inferior leads and ventricular bigeminy.

Case report: 59-year-old female patient was admitted to the Emergency department (ED) due to chest pain that started 3 hours before arriving at the ED. The day before, the patient was stung by a bee in the lip with localized angioedema reaction. Upon arrival at the ED, the patient's vital parameters were normal, and her clinical status was unremarkable, with no signs of angioedema or allergic reactions. Acid-base balance and X-ray were normal, while laboratory findings showed elevated high-sensitivity cardiac troponin (699 ng/L) with neat inflammatory parameters and D-dimers. 12-lead electrocardiogram showed sinus rhythm with a discrete elevation in inferior leads and ventricular bigeminy (**Figure 1**). Aspirin was prescribed, and the patient was admitted to the Coronary Care Unit (CCU) with a diagnosis of acute coronary syndrome. Immediately after admission to the CCU, an emergency coronary angiography was performed, which showed intact epicardial blood vessels. Echocardiography findings were normal except for asynchronous movement of the left ventricle apex due to ventricular bigeminy. The patient was

treated with corticosteroids, antihistamines, nitrates, low-molecular-weight heparin, beta-blockers, and aspirin. During hospitalization, the patient was hemodynamically and rhythmically stable. At the time of discharge, the patient was in sinus rhythm without ischemic changes and without ventricular extrasystoles with normal echocardiography findings.

Conclusion: Considering the findings of coronary angiography, echocardiography, laboratory findings, and the clinical presentation, our patient was diagnosed with Kounis syndrome type I. We would like to emphasize that educating nurses about the connection between an allergic reaction and acute coronary syndrome in CCU is extremely important, considering that nurses in CCU actively monitor patients and provide 24-hour care.

LITERATURE

- Rodríguez-Ruiz C, Puig-Carrión G, Delgado-Nieves A, López-Candales A. Kounis Syndrome: A More Commonly Encountered Cause of Acute Coronary Syndrome. *Heart Views.* 2019 Jul-Sep;20(3):122-125. https://doi.org/10.4103/HEARTVIEWS.HEARTVIEWS_43_19
- Tripolino C, Tassone EJ, Morabito G, Grillo P, Missiroli B. Acute coronary stent thrombosis: A case of type 3 Kounis syndrome. *J Cardiol Cases.* 2018 Oct 23;19(1):33-35. <https://doi.org/10.1016/j.jccase.2018.09.003>

RECEIVED:
September 20, 2024

ACCEPTED:
October 31, 2024

