Author`s Reply

To the Editor,

We would like to thank the authors for their comments regarding our article in their letter entitled "Kounis syndrome not induced but prevented by the implantation of a drug-eluting stent," published in Anatol J Cardiol 2017; 17: 412-3 (1).

Cardiovascular disease is an increased risk factor for anaphylactic severity. Various pathophysiologic mechanisms have been reported to explain cardiac anaphylaxis. In healthy individuals, a large number of mast cells exist in cardiac tissues, particularly among myocardial fibers, around the blood vessels, and in the intima of the coronary arteries. Because of the allergic reaction, the activation of mast cells in the skin and lungs, as well as in the heart, results in the release of various mediators such as histamine, leukotriene C4, prostaglandin D2, tryptase, kinase, and renin. The release of these mediators leads to cardiac symptoms such as coronary artery spasm, hypotension, dysfunction of cardiac contractility, and arrhythmia.

In patients with coronary artery disease, there is an increase in the number and concentration of mast cells in the coronary arteries and atherosclerotic plaques. In allergic reactions in patients with an atherosclerotic heart disease, activation of mast cells and release of mediators can lead to acute coronary syndrome by causing coronary artery spasm, plaque erosion, and rupture (2).

Our case was diagnosed with type 2 variant of Kounis syndrome because the patient already had an underlying coronary artery disease, and the first drug induced an allergic reaction that resulted in myocardial infarction. Our patient had a single 90% lesion in the midportion of the left circumflex artery, and the implanted stent completely restored the coronary circulation.

Following the intake of the same drug for the second time, in which a similar or more severe hypersensitivity reaction is expected, the patient developed anaphylaxis without cardiac involvement. It is likely that the coronary artery disease was treated and active and the vulnerable plaques were stabilized, and therefore, Kounis syndrome did not occur during the second drug reaction.

Although drug-releasing stents themselves cause hypersensitivity in rare cases when applied to the patient with correct indications, microvascular function recovery and increased microcirculatory resistance index are reduced (3).

Thus, it is possible to prevent an anaphylaxis from becoming more severe.

Kadriye Terzioğlu
Department of Chest Diseases, Section of Immunology and Allergic Diseases, Faculty of Medicine, Uludağ University; Bursa-*Turkey*

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Address for Correspondence: Dr. Kadriye Terzioğlu
Uludağ Üniversitesi Tıp Fakültesi
Göğüs Hastalıkları Anabilim Dalı
İmmünoloji ve Alerjik Hastalıklar Bölümü, Bursa-*Türkiye*
E-mail: dr.kadriyete@gmail.com

Patients' knowledge and perspectives on vitamin K antagonists for stroke prevention in atrial fibrillation: implications for treatment quality

To the Editor,

Contemporary management of atrial fibrillation (AF) focuses on effective thromboprophylaxis with either direct oral anticoagulants (DOACs) or vitamin K antagonists (VKAs; e.g., warfarin/acenocoumarol). Although DOACs offer a viable alternative, the majority of patients continue to receive VKAs. The quality of VKA therapy is determined by the proportion of time spent in the target range (TTR) of the international normalized ratio (INR, 2.0–3.0). The greatest benefit with VKAs is derived with TTR of ≥70% (1), whereas a low TTR predisposes to adverse outcomes (2).

Obtaining a stabile INR that corresponds to TTR of ≥70% is often challenging owing to social, clinical, and behavioral influences. The SAMe-TT_2R_2 score (Sex, female; Age, <60 years; >2 medical comorbidities; amiodarone treatment; tobacco smoking; race, non-white) has been recently proposed to facilitate the differentiation of patients who are expected to achieve stable anticoagulation (i.e., SAMe-TT_2R_2 score of ≥2) from those who are at a risk for labile INR (3). However, beyond clinical and social aspects, behavioral factors pertaining to the patients' comprehension and acceptance of the complex requirements of VKA therapy could also affect treatment quality (4).

We report the results of a survey that assessed the knowledge and expectations regarding VKA treatment in a cohort of patients with non-valvular AF (n=416; mean age, 65.1±9.9 years; 63.7% males) and the influence of the investigated behavioral factors on the quality of anticoagulation, as determined by 1-year TTR. An optimal anticoagulation was defined as 1-year TTR of ≥70%.

Regarding VKA-related knowledge, 98.1% of patients properly identified AF as an anticoagulation indication, and 97.3% pro-

vided the brand name of their VKA medication, which might bear significance for emergency situations. Conversely, only 68.1% correctly identified an INR target range and 13.9% were unaware regarding the requirement for long-term anticoagulation persistence. Similar knowledge gaps were previously described with respect to poor quality anticoagulation and unwarranted treatment discontinuation, potentially leading to serious complications (5). Concerning satisfaction with VKAs, 77.6% of patients had a positive perception regarding VKA-related influence on the quality of life (QoL), whereas 74.7% expressed a positive attitude to QoL improvement with an improved VKA management.

Importantly, on multivariate analysis adjusted for the SAMe-TT_2R_2 score, we demonstrated an independent association of patients' knowledge [correct identification of INR target range; odds ratio (OR), 1.66; 95% confidence interval (CI), 1.11–2.71], patients' satisfaction with VKAs [positive perception of VKA-related impact on QoL (OR, 3.50; 95% CI, 2.06–5.95), and a positive attitude to QoL improvement with an improved VKA management (OR, 1.54; 95% CI, 1.13–2.08)] with stable INR control, defined as 1-year TTR of ≥70%. A positive perception of VKA-related impact on QoL improved discrimination for optimal INR control (ΔC-statistic, 0.043; 95% CI, 0.014–0.072; p=0.004) compared with risk stratification using the SAMe-TT_2R_2 score.

In conclusion, our results support the practical relevance of patient education to improve the quality of and compliance with VKAs and lend support to the significance of behavioral influences on treatment quality in clinical practice. Nevertheless, behavioral factors are inherently complex and unlikely to become a part of a practical risk stratification tool. The decisions on anticoagulation modality (VKAs vs. DOACs) should be essentially based on clinical risk assessment (e.g., SAMe-TT_2R_2 score), but patients' perspectives deserve a close consideration to attain a positive attitude, hopefully translating to a greater treatment success.

Marija Polovina[1,2], Dijana Đjikić[1], Ana Vlajković[2], Matej Vilotijević[2]
[1]Clinic of Cardiology, Clinical Center of Serbia; Belgrade-*Serbia*
[2]School of Medicine, Belgrade University; Belgrade-*Serbia*

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Address for Correspondence: Marija Polovina, MD, PhD
Cardiology Clinic, Clinical Center of Serbia
26 Visegradska, 11000 Belgrade-*Serbia*
Phone: +38111 361 6319 Fax:+ 38111 361 6318
E-mail: maki.marijapolovina@gmail.com

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