ST-elevation acute coronary syndrome with thrombotic occlusion of the proximal segment of the circumflex artery in a patient with antiphospholipid syndrome: successful drug-coated balloon implantation

©Nikolina Glavinić*, ®Bruno Mihatović, ®Ana Dadić, ©Mihael Matić

Dubrovnik General Hospital, Dubrovnik, Croatia

RECEIVED: February 19, 2023 ACCEPTED: February 22, 2023 **KEYWORDS:** acute myocardial infarction, antiplatelet therapy, antiphospholipid syndrome.

CITATION: Cardiol Croat. 2023;18(3-4):53. | https://doi.org/10.15836/ccar2023.53

*ADDRESS FOR CORRESPONDENCE: Nikolina Glavinić, Opća bolnica Dubrovnik, Dr. Roka Mišetića 2, HR-20000 Dubrovnik, Croatia. / Phone: +385-95-3664-339 / E-mail: nglavinic5@gmail.com

ORCID: Nikolina Glavinić, https://orcid.org/0000-0001-6346-0598 • Bruno Mihatović, https://orcid.org/0000-0003-1406-338X Ana Dadić, https://orcid.org/0000-0002-8985-8083 • Mihael Matić, https://orcid.org/0000-0003-4720-7706

Introduction: Antiphospholipid syndrome is an autoimmune coagulation disorder that is manifests clinically as recurrent venous or arterial thrombosis. In some case thrombocytopenia can be the only manifestation of the syndrome.¹³

Case report: We present a 43-year-old patient with previously known antiphospholipid syndrome who was admitted to the Coronary Care Unit due to acute myocardial infarction with ST-elevation of the posterolateral location (STEMI). An emergency coronary angiography was performed, which showed thrombotic occlusion of the proximal segment of the circumflex artery. A primary percutaneous coronary intervention was performed, and the target lesion was treated with drug coated balloon (DCB)-Sequent Please Neo 3.0x20 mm. In the control angiography, there is no narrowing. There is a normal TIMI grade 3 flow without any residual thrombus. In the literature, results after treatment of ST-elevation acute coronary syndrome in patients with antiphospholipid syndrome are variable. When PCI is used for STEMI in patient with antiphospholipid syndrome, DCB therapy (although not mentioned in current guidelines) is safe and effective and has shown good clinical effects during a one-year follow-up period. Dual antiplatelet therapy (clopidogrel + aspirin) was started along with warfarin with a target INR >2 (The indication for anticoagulant therapy is the previously known antiphospholipid syndrome). After achieving target INR values, he was discharged and referred to rheumatology and cardiology outpatient clinics for further follow-up. For patients experiencing an acute myocardial infarction of thrombophilic genesis, using thromboaspiration, antiplatelet and anticoagulant medications, as well as applying drug- coated balloons (DCB), can help avoid the placement of a stent and all the complications associated with it. The BASKET SMALL 2 trial has described how this method can provide optimal results.

- Semczuk-Kaczmarek K, Platek AE, Ryś-Czaporowska A, Szymanski FM, Filipiak KJ. Acute Myocardial Infarction Due to Antiphospholipid Syndrome
 Case Report and Review of the Literature. Curr Probl Cardiol. 2021 Mar;46(3):100552. https://doi.org/10.1016/j.cpcardiol.2020.100552
- Hao X, Huang D, Wang Z, Zhang J, Liu H, Lu Y. Study on the safety and effectiveness of drug-coated balloons in patients with acute myocardial infarction. J Cardiothorac Surg. 2021 Jun 21;16(1):178. https://doi.org/10.1186/s13019-021-01525-8
- 3. Arachchillage DRJ, Laffan M. What is the appropriate anticoagulation strategy for thrombotic antiphospholipid syndrome? Br J Haematol. 2020 Apr;189(2):216-227. https://doi.org/10.1111/bjh.16431

10th Croatian Conference on Interventional Cardiology – CROINTERVENT 2023 Zagreb, March 9-12, 2023