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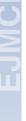
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Triple antithrombotic therapy in the

absence of atrial fibrillation in ACS

with high thrombus burden

- 4 Antonios Samaras, Konstantinou Thrasivoulos,
- 5 Ioannis Vogiatzis* D

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ABSTRACT

Keywords: PCI, ACS, triple antithrombotic therapy, thrombus burden, thrombus aspiration, IVUS, deferred stenting.

Type of Article: Images Specialty: Cardiology

Correspondence to: Ioannis Vogiatzis

*Department of Cardiology, General Hospital of Veroia, Veroia, Greece.

Email: ivogia@hotmail.gr

Full list of author information is available at the end of the article.

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8 Case Report

We present the case of a 45-year-old female, a current smoker, with a history of multiple myocardial infarctions, 10 all of which concerned the same vessel. In 2019 and 2022, 11 she experienced inferior ST-segment elevation myocardial 12 13 infarcts, both treated with thrombolysis and percutaneous coronary intervention (PCI) on the right coronary artery 14 (RCA). Recently, the patient presented with angina-like 15 symptoms persisting for a week, accompanied by raised cardiac markers. 17

Upon admission, coronary angiography revealed total occlusion and a significant amount of thrombus in the middle segment of a large-diameter, dilated RCA (Figure 1A). We performed mechanical thrombus aspiration [1], followed by percutaneous transluminal coronary angioplasty without stent placement (Figure 1B). Following the procedure, the patient was treated with a 48-hour intravenous drip of tirofiban, a per os regimen of acetylsalicylic acid, statin, and subcutaneous enoxaparin. A subsequent angiography demonstrated improved coronary flow (TIMI II) and reduced thrombus burden, while the posterior descending artery (PDA) could be demonstrated open (Figure 1C). The patient was discharged 5 days later with a treatment plan consisting of aspirin 100 mg, clopidogrel 75 mg, and rivaroxaban 15 mg daily for 1 month. A new coronary angiography was planned a month later (Figure 1D) [2].

During the follow-up angiography, the RCA remained occluded in the mid-segment; however,

the PDA appeared patent. During the same course, the patient was treated successfully with PCI [three Megatron Synergy stents $(5 \times 32 \text{ mm})$ – post-dilated with a 6 mm balloon]. Intravascular ultrasound (IVUS) imaging [3] (Figure 1E) was utilized to plan the procedure and ensure stent placement accuracy (Figure 1F). TIMI III flow across the RCA and the PDA was achieved (Figure 1G). The patient was discharged uneventfully, and the plan is to remain on aspirin, clopidogrel, and rivaroxaban for 1 year.

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Declarations

The case report was approved by the Scientific Committee of the Hospital (Number 43/18-5-2024) according to the Helsinki Declaration, and written consent was obtained from the patient. The datasets during and/or analyzed during the current description are available from the corresponding author upon reasonable request.

Conflict of interests

The authors declare that there is no conflict of interest regarding the publication of this article.

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Author details

Antonios Samaras, Konstantinou Thrasivoulos, Ioannis Vogiatzis 59
Department of Cardiology, General Hospital of Veroia, Veroia, 60
Greece 61

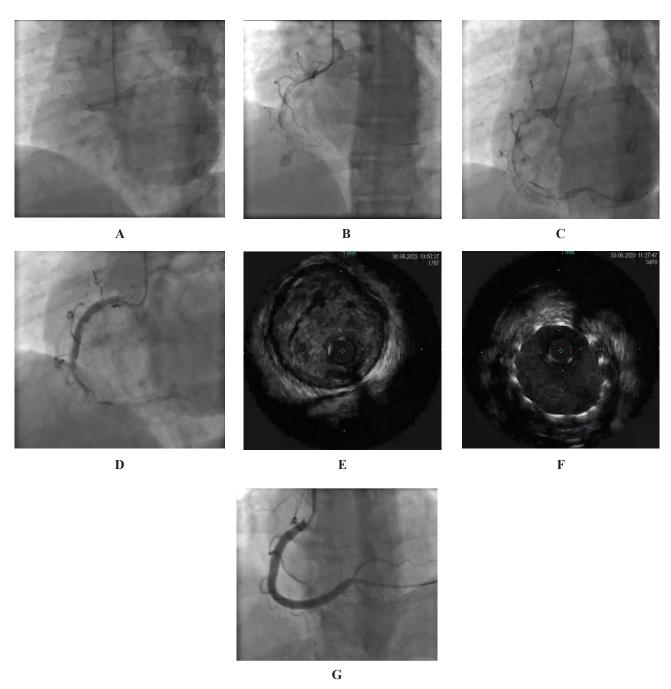


Figure 1. A: First coronary arteriography - RCA, B: RCA after thrombus aspiration, C: RCA after 48 hours on Tirofiban, D: RCA after 1 month on triple antithrombotic therapy, E: IVUS Intraluminal thrombus, F: IVUS - Post PCI stent placement, G: RCA after final PCI.

References

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- Vela CNC, Gamarra-Valverde NN, Inga KE, Durand P. Manual thrombus aspiration in patients with ST-elevation myocardial infarction with high thrombus burden and a total ischemic time greater or equal than 3 hours: mini review. Curr Probl Cardiol. 2023;48(10):101786. https:// doi.org/10.1016/j.cpcardiol.2023.101786
- Pradhan A, Bhandari M, Vishwakarma P, Sethi R. Deferred 2. stenting for heavy thrombus burden during percutaneous
- Rev. 2021;16:e08. https://doi.org/10.15420/ecr.2020.31 Groenland FTW, Neleman T, Kakar H, Scoccia A, Ziedses 74 des Plantes AC, Clephas PRD, et al. Intravascular ultrasound-guided versus coronary angiography-guided 76 percutaneous coronary intervention in patients with acute myocardial infarction: a systematic review and meta-analysis. Int J Cardiol. 2022;353:35–42. https://doi. org/10.1016/j.ijcard.2022.01.021

coronary intervention for ST-elevation MI. Eur Cardiol

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