Κλινική Περίπτωση

Δ.Παπακωνσταντίνου Καρδιολόγος

Γ.Ν.Θ.Αγιος Παύλος

The technique of coronary artery recanalisation by primary PTCA was introduced in 1983 by Hartzler *et al*[5] and its potential advantages over thrombolytic therapy were recognised even in the early experience.[5,6] Primary PTCA causes mechanical disruption of the occlusive thrombus and the underlying stenosis and results in a rapid restoration of coronary blood flow.

Διαχείρηση θρόμβων
Προληψη περιφερικού εμβολισμού

- 1. Direct stenting / μεταδιάταση?
- 2. Θρομβοαναρρόφηση + IIb/IIIa + Stenting?

Routine use of thrombus aspiration is not recommended.[157,159]	III	A

- 3. Stenting σε δεύτερο χρόνο?

Routine use of deferred stenting is not recommended.[153–155]	III	B

- 4. Ενδοστεφανιαία θρομβόλυση + Stenting?
- Αγγειοδιασταλτικά φάρμακα - Θεραπευτική Υποθερμία (EURO-ICE)

Direct Stenting Versus Pre-Dilation in ST-Elevation Myocardial Infarction: A Systematic Review and Meta-Analysis

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Objectives: *This study aimed at comparing direct stenting (DS) versus stenting with pre-dilation (SP) in patients with ST-elevation myocardial infarction (STEMI), using a systematic review and meta-analysis of published evidence.*

Background: *There is conflicting evidence whether stenting strategy impacts clinical outcomes in patients with STEMI.*

Methods: *We searched EMBASE, MEDLINE, and CENTRAL, from inception to December 2014. The primary endpoint was mortality. Secondary endpoints included major adverse cardiac events (MACEs), ST-segment resolution, and angiographic outcomes.*

Results: *A total of 9,331 patients enrolled in 12 studies (3 randomized controlled trials, RCTs; 9 non-randomized studies, NRSs) were included. DS was associated with lower mortality (OR 0.55; 95%CI: 0.33–0.94; P = 0.03) in NRSs, and overall (OR 0.56; 95%CI: 0.37–0.86; P = 0.008). Mortality was non-significantly reduced in RCTs (OR 0.56; 95%CI: 0.26–1.23; P = 0.15). DS was also associated with lower MACE rate (OR 0.71; 95%CI 0.60–0.84; P < 0.0001) in NRSs, but not in RCTs (OR 0.99; 95%CI: 0.61–1.60; P = 0.96). ST-segment resolution, no reflow, final thrombolysis in myocardial infarction (TIMI) flow and final TIMI myocardial perfusion or blush grade were significantly better with DS in NRSs, and non-significantly better in RCTs.*

Conclusions: *The available evidence suggests that DS in STEMI might be associated with better clinical and procedural outcomes, as compared with SP. However, the fact that RCTs account for the minority of available data and that most of the available studies poorly reflect current clinical practice, as well as the existence of publication bias, preclude drawing definitive conclusions.* (J Interven Cardiol 2015;28:119–131)

> World J Emerg Med. 2020;11(2):87-92. doi: 10.5847/wjem.j.1920-8642.2020.02.004.

Post-dilatation improves stent apposition in patients with ST-segment elevation myocardial infarction receiving primary percutaneous intervention: A multicenter, randomized controlled trial using optical coherence tomography

Jun Jiang [1], Nai-Liang Tian [2], Han-Bin Cui [3], Chang-Ling Li [1], Xian-Bao Liu [1], Liang Dong [1], Yong Sun [1], Xiao-Min Chen [3], Shao-Liang Chen [2], Bo Xu [4], Jian-An Wang [1]

Affiliations + expand

PMID: 32076473 PMCID: PMC7010524 DOI: 10.5847/wjem.j.1920-8642.2020.02.004

Free PMC article

Abstract

Background: Stent failure is more likely in the lipid rich and thrombus laden culprit lesions underlying ST-segment elevation myocardial infarction (STEMI). This study assessed the effectiveness of post-dilatation in primary percutaneous coronary intervention (pPCI) for acute STEMI.

Methods: The multi-center POST-STEMI trial enrolled 41 consecutive STEMI patients with symptom onset <12 hours undergoing manual thrombus aspiration and Promus Element stent implantation. Patients were randomly assigned to control group (n=20) or post-dilatation group (n=21) in which a non-compliant balloon was inflated to >16 atm pressure. Strut apposition and coverage were evaluated by optical coherence tomography (OCT) after intracoronary verapamil administration via thrombus aspiration catheter, post pPCI and at 7-month follow-up. The primary endpoint was rate of incomplete strut apposition (ISA) at 7 months after pPCI.

Results: There were similar baseline characteristics except for stent length (21.9 [SD 6.5] mm vs. 26.0 [SD 5.8] mm, respectively, P=0.03). In post-dilatation vs. control group, ISA rate was lower (2.5% vs. 4.5%, P=0.04) immediately after pPCI without affecting final TIMI flow 3 rate (95.2% vs. 95.0%, P>0.05) or corrected TIMI frame counts (22.6±9.4 vs. 22.0±9.7, P>0.05); and at 7-month follow-up (0.7% vs. 1.8%, P<0.0001), the primary study endpoint, with similar strut coverage (98.5% vs. 98.4%, P=0.63) and 1-year rate of major adverse cardiovascular events (MACE).

Conclusion: In STEMI patients, post-dilatation after stent implantation and thrombus aspiration improved strut apposition up to 7 months without affecting coronary blood flow or 1-year MACE rate. Larger and longer term studies are warranted to further assess safety (ClinicalTrials.gov identifier: NCT02121223).

Διαχείρηση θρόμβων
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Ενδοστεφανιαία θρομβόλυση

- T-TIME,STRIVE, OPTIMAL trial (alteplase)

  RESTORE-MI (tenecteplase)

- The recently published T-TIME study is a Phase 2 clinical trial of low-dose adjunctive intracoronary fibrinolysis with alteplase in reperfused STEMI. *The results do not support the use of low-dose alteplase either routinely in patients at risk of CMD or in those patients with slow- or no-reflow*.
- The potential for intracoronary lytic therapy to prevent or treat CMD remains to be determined.

Pathophysiology and diagnosis of coronary microvascular dysfunction in ST-elevation myocardial infarction
Cardiovasc Res. 2020 Mar 15; 116(4): 787–805.

Ενδοστεφανιαία Θρομβόλυση – Διλλήματα

- Δόση/φαρμακευτική ουσία?
- Μέθοδος χορήγησης?
- Συνδυασμός με IIβ/IIIα?
- Τι θα συμβεί σε περίπτωση διαχωρισμού – ρήξης?

- Γυναίκα, 65, καπνίστρια, δισλιπιδαιμία, σαφηνεκτομή, στηθάγχη κόπωσης από εβδομάδος
- STEMI κατωτέρου τοιχώματος, έναρξη άλγους 2,5 ώρες πριν την άφιξή της στο νοσοκομείο.


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Series 2
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3/2/2023


3/2/2023
10:22 PM
Series 4
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3/2/2023
Zoom 100%


3/2/2023
10:23 PM
Series 7
Run 7 - Frame 1 / 83
3/2/2023
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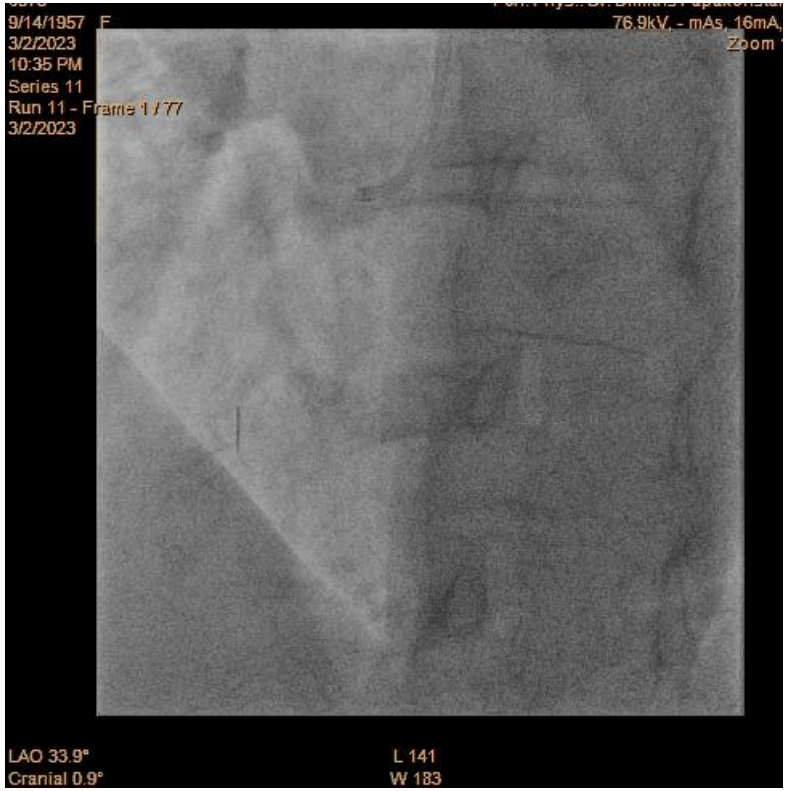
Cranial 0.9°
L 138
W 190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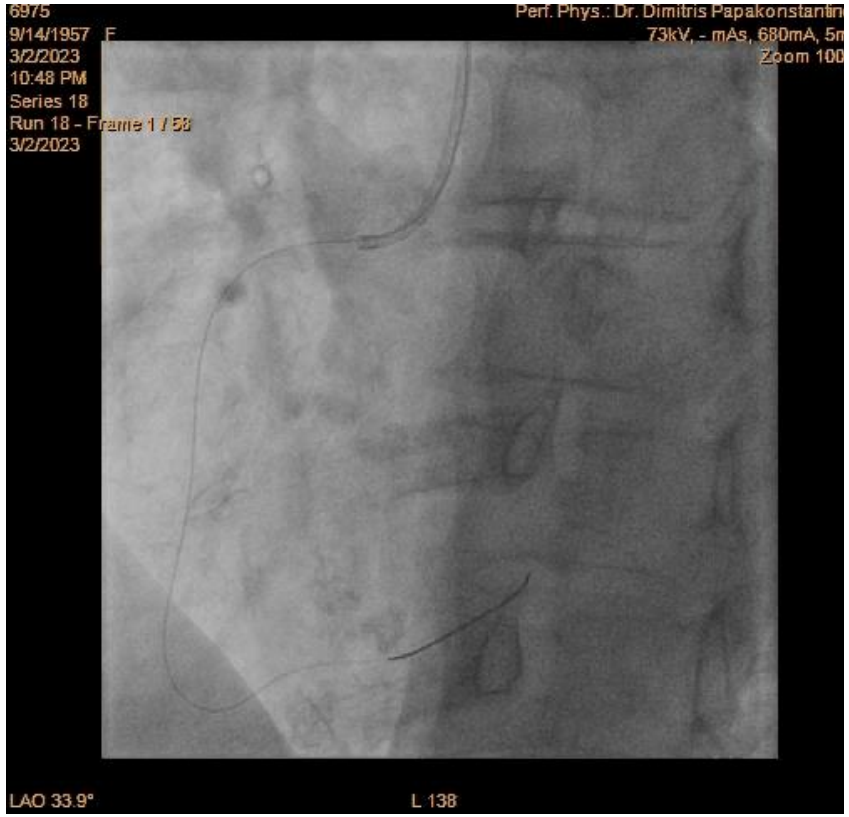
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Perf. Phys.: Dr. Dimitris Papakonstantin
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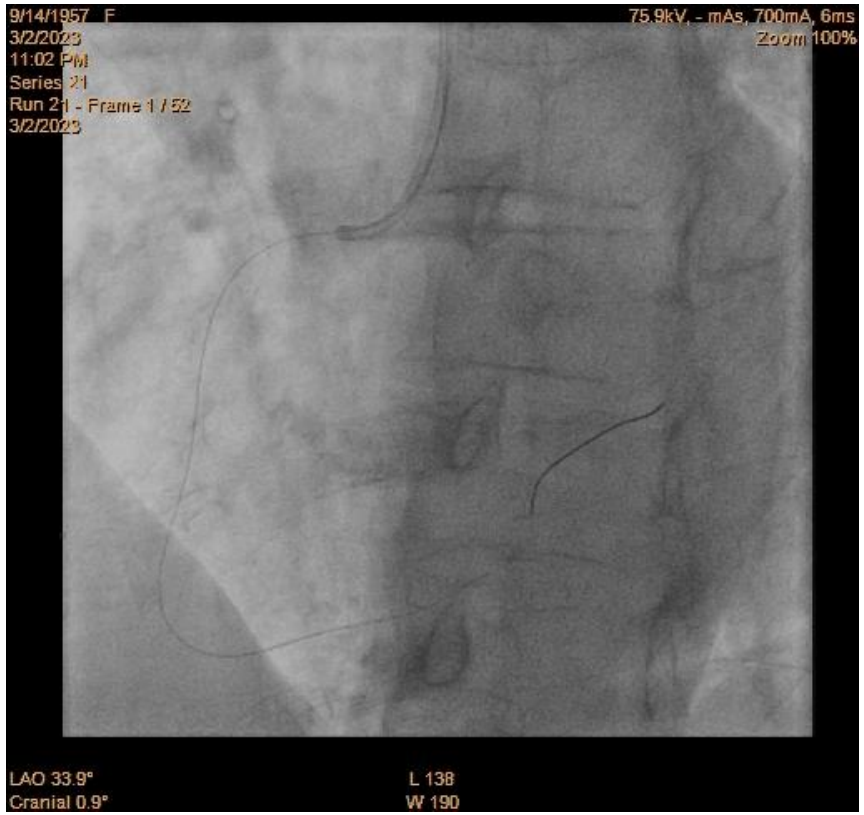
L 138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Cranial 0.9°
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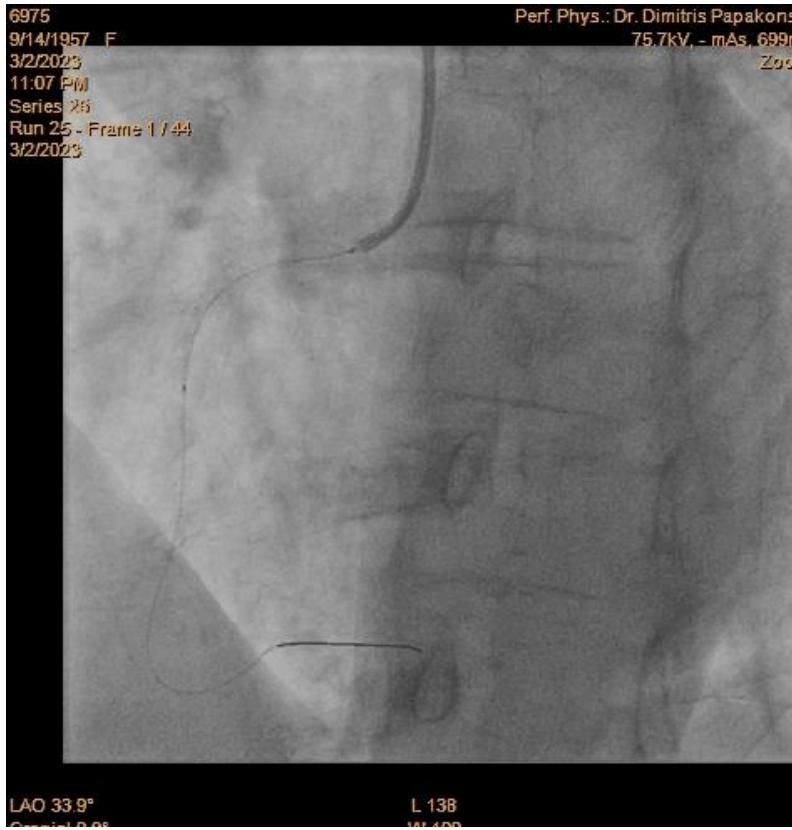
W 190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Perf. Phys.: Dr. Dimitris Papakons
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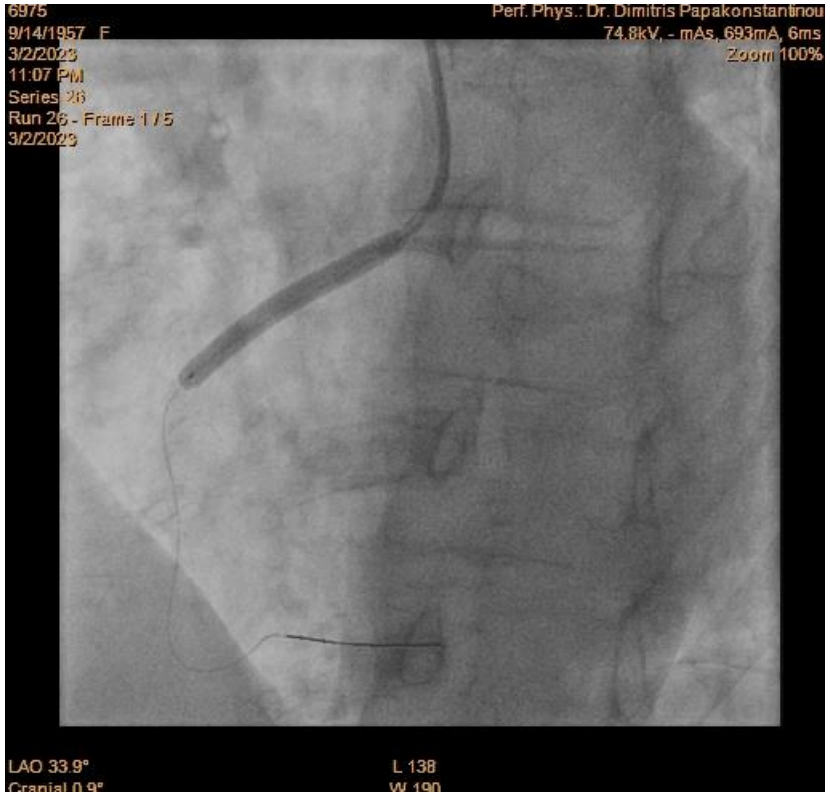
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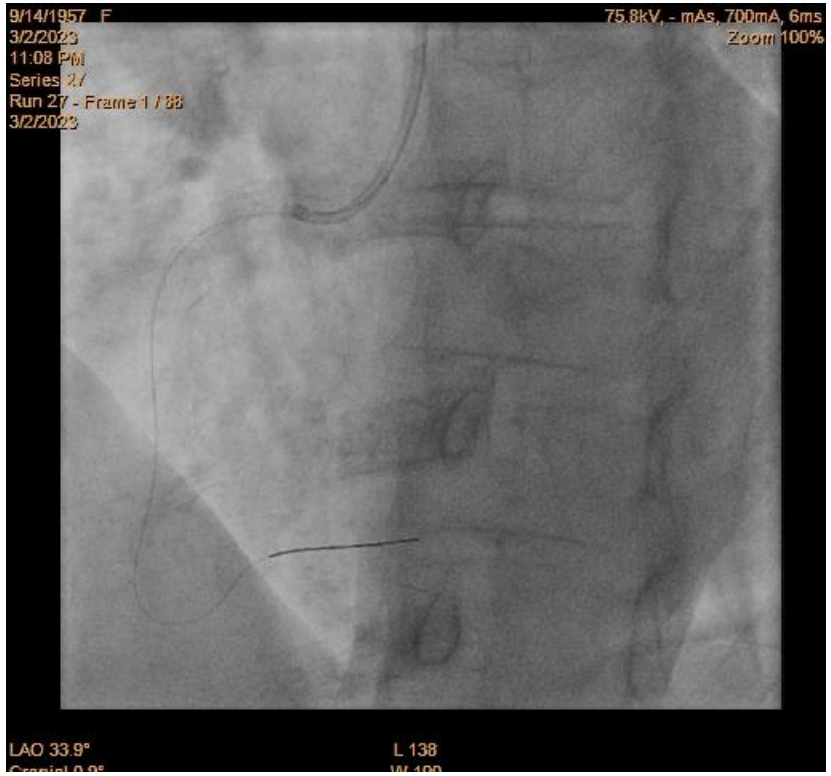
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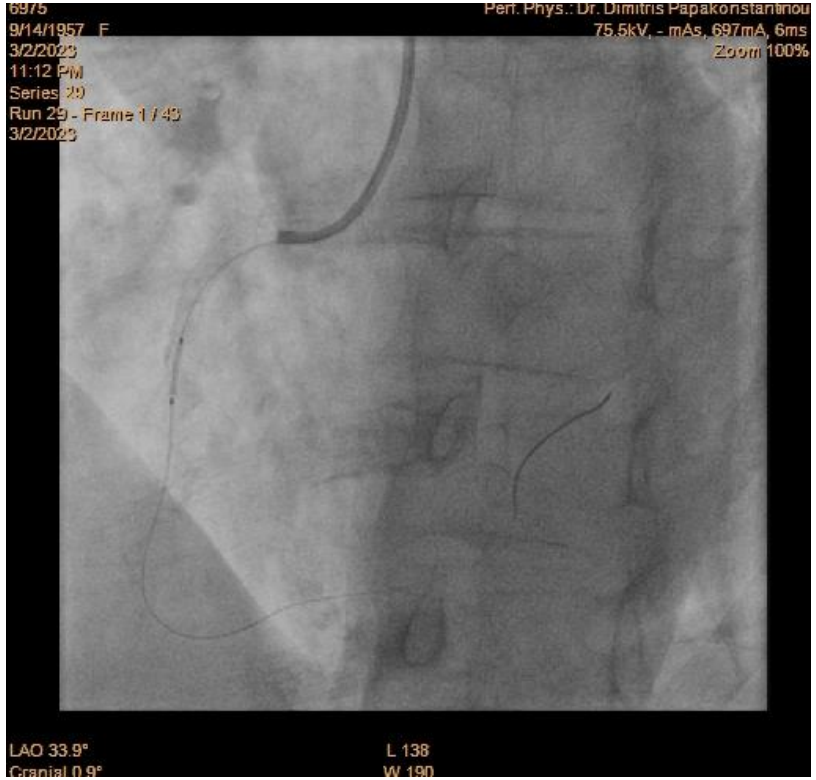
L 138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LAO 33.9°
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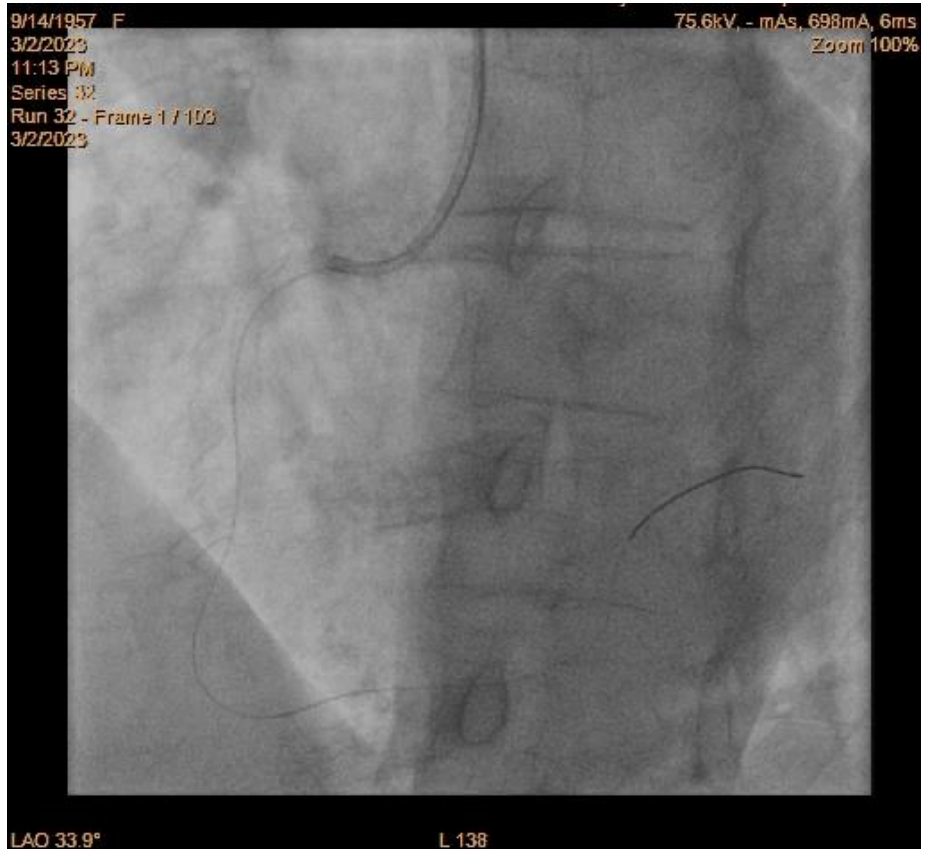
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7039
12/13/1967 F
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Perf. Phys.: Dr. Dimitris Papakonstantinou
76.7kV, - mAs, 695mA, 6ms
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No-reflow

- **Microvascular obstruction**
- **Intramyocardial haemorrhage**
- **Coronary microvascular dysfunction**
- **Reperfusion injury**