

## Case report

Spontaneous LM coronary artery dissection.  
Successful 'rescue' from thrombolysis.

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KYANUS STAYROS EUROMEDICA.

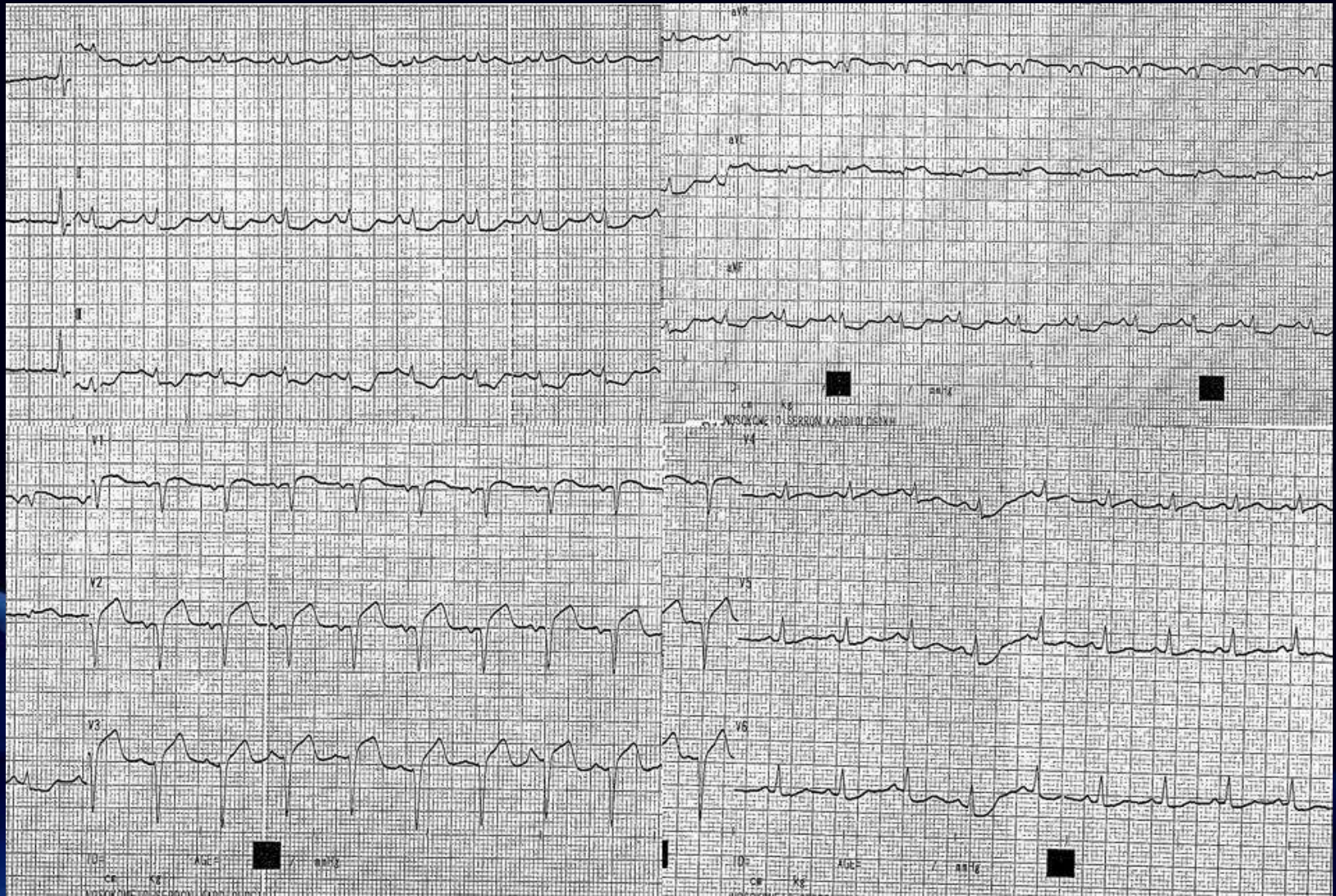


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## **CASE DESCRIPTION**

**A 42 years old caucasian woman, without any previous medical history or any risk factors for coronary artery disease presented to a district general hospital, with no cardiac catheter laboratory facilities, complaining about a sudden-onset substernal chest pain lasting for the past 2h. Her ECG findings on admission were ST elevation in leads I, aVL, aVF, V2-V6.**





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**An anterior myocardial infarction was the prompt diagnosis at the time. A thrombolytic treatment was started immediately, with regression of the angina and almost normalization of the ECG changes. On the eighth in hospital day, the patient suffered another episode of substernal chest pain, with hypotension and signs of left ventricular heart failure .The ECG showed extensive ST elevation in leads I, aVL, V1-V6. Treatment with intravenous inotropic amines and re-thrombolysis (half-dose) was initiated and she was transferred to our institution.**

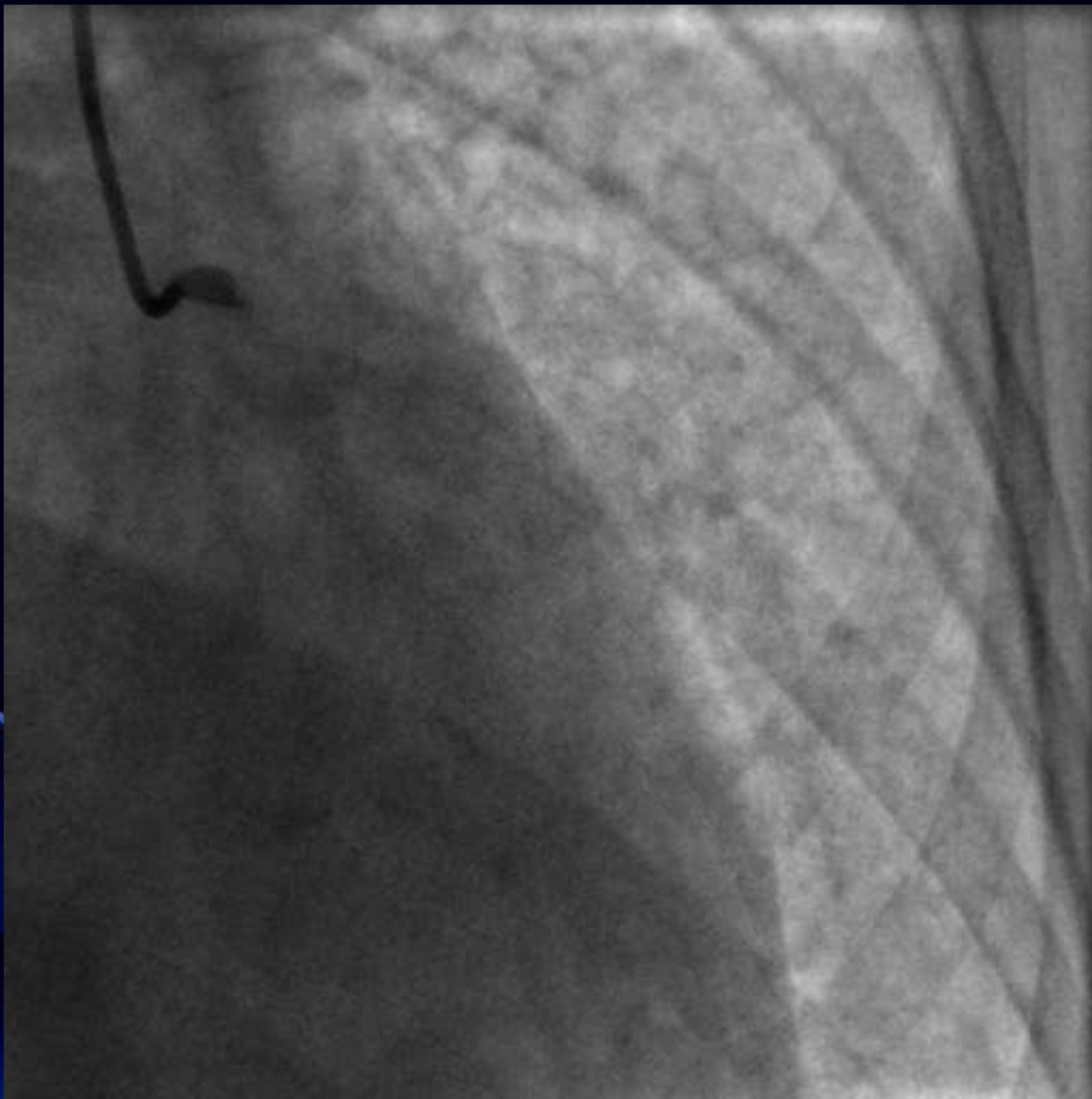




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**On arrival to the coronary care unit, the patient was in cardiogenic shock. Echo on admission displayed anterior, apex and anteroseptum akinesia and severely impaired left ventricular function. The ejection fraction of the patient was 25% with moderate mitral regurgitation. She was intubated, an intra-aortic balloon pump was advanced and she was urgently transferred to the cardiac catheterization laboratory.**

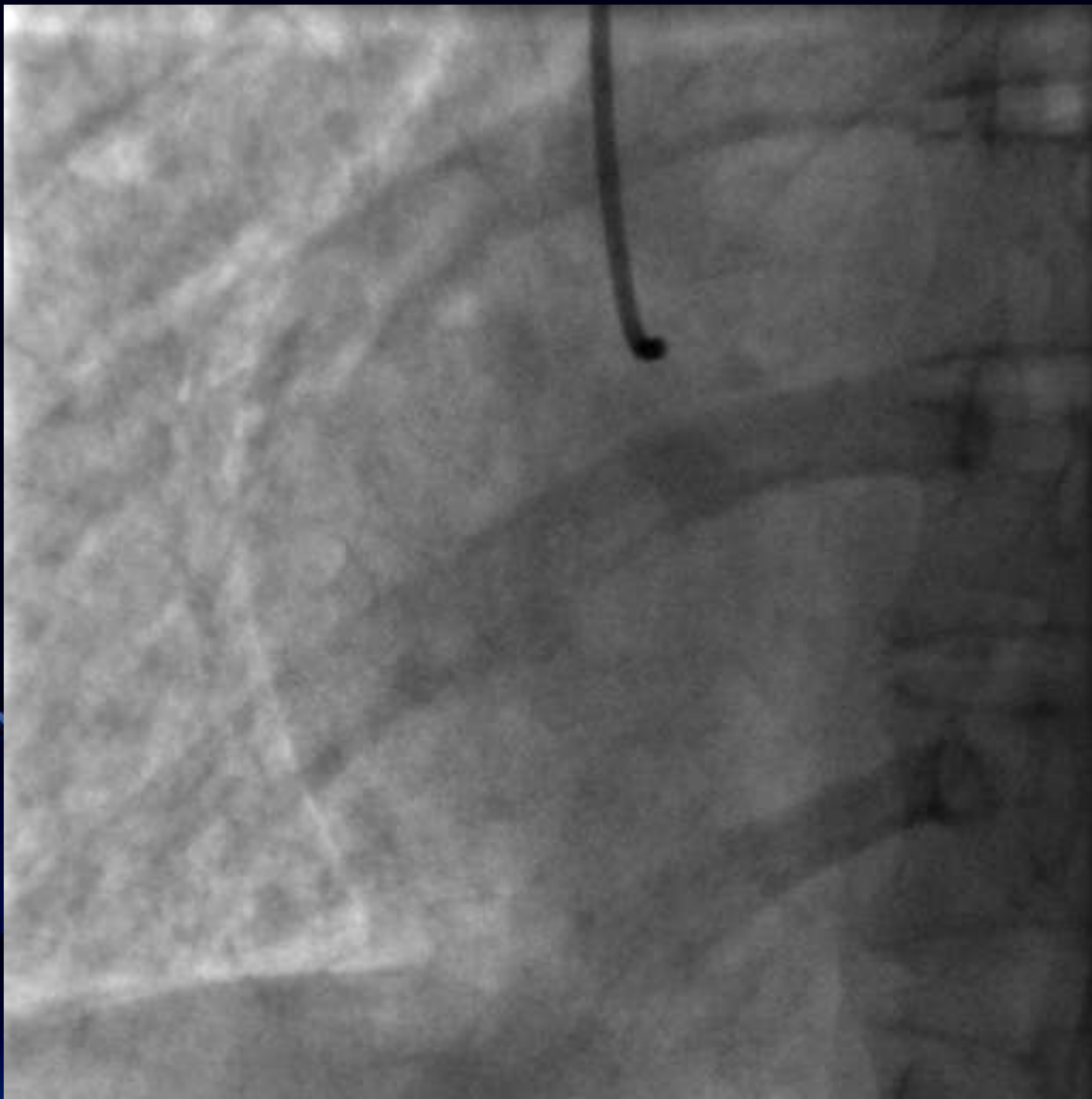




**LM dissection with  
total occlusion of the  
LAD and subtotal  
occlusion of the CX**

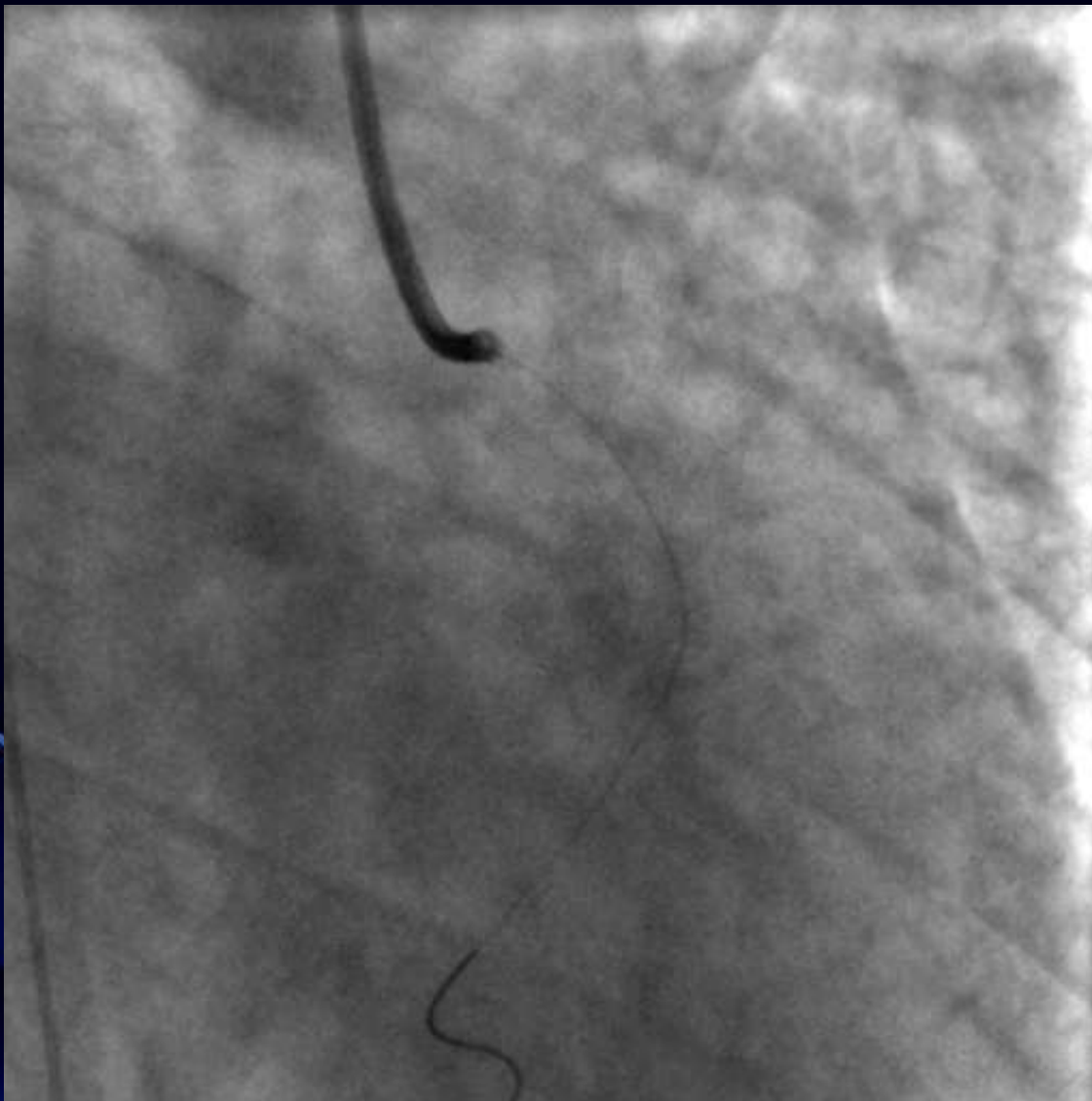


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**Normal RCA**



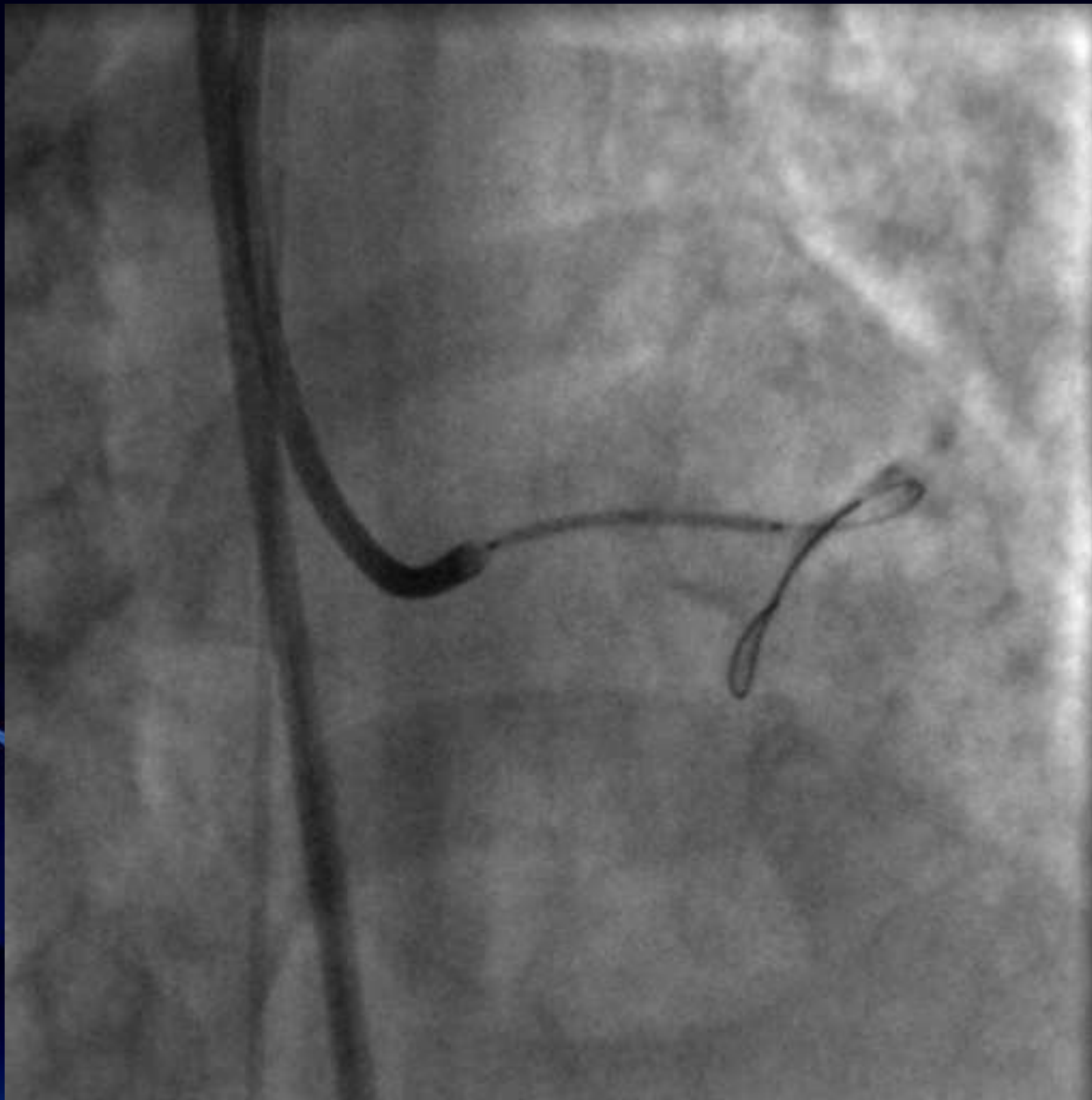


**Q 3.5 guiding catheter**

**Runthrough guide wire to CX**



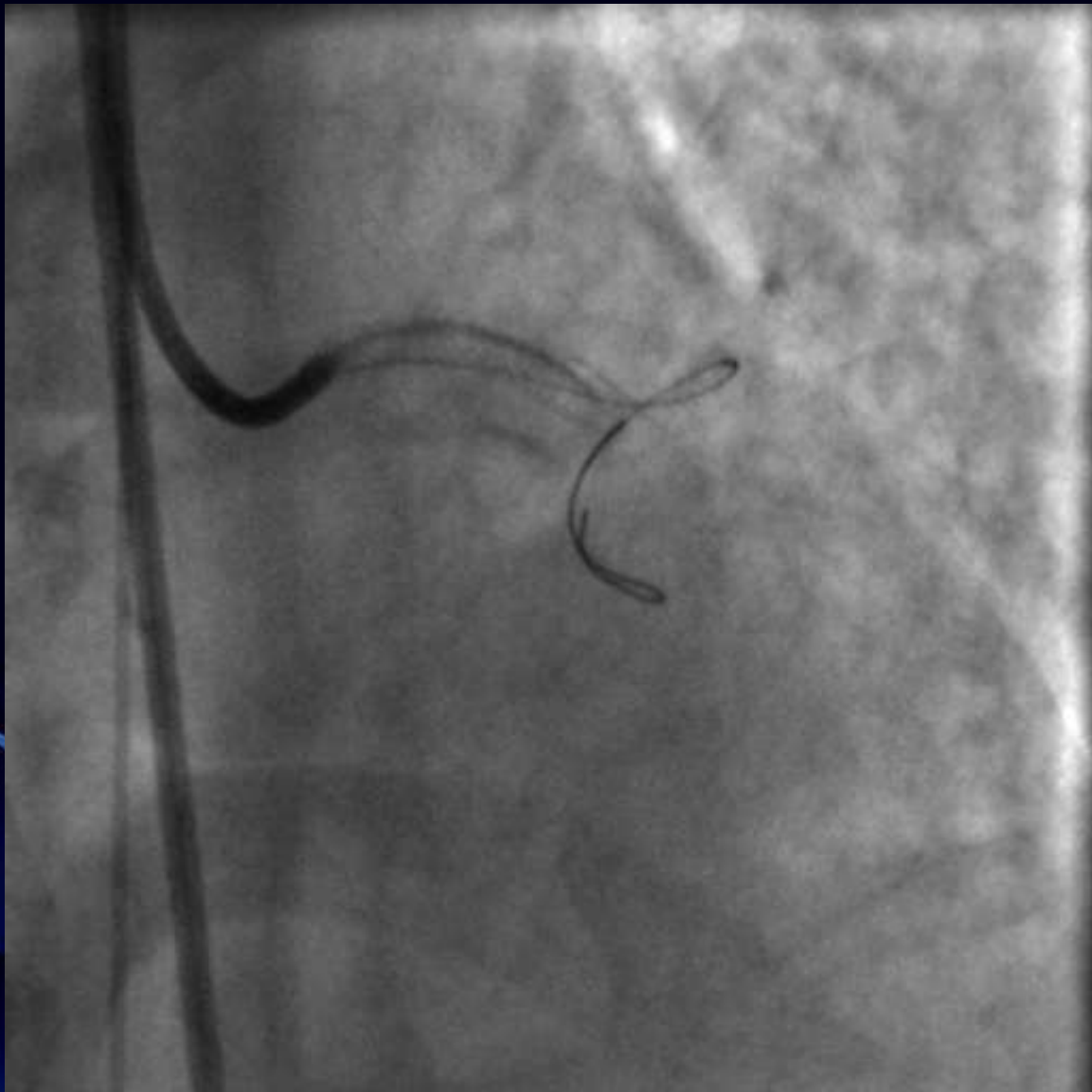
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**LM-CX proximal  
stenting with TAXUS  
element 3.5x24mm**

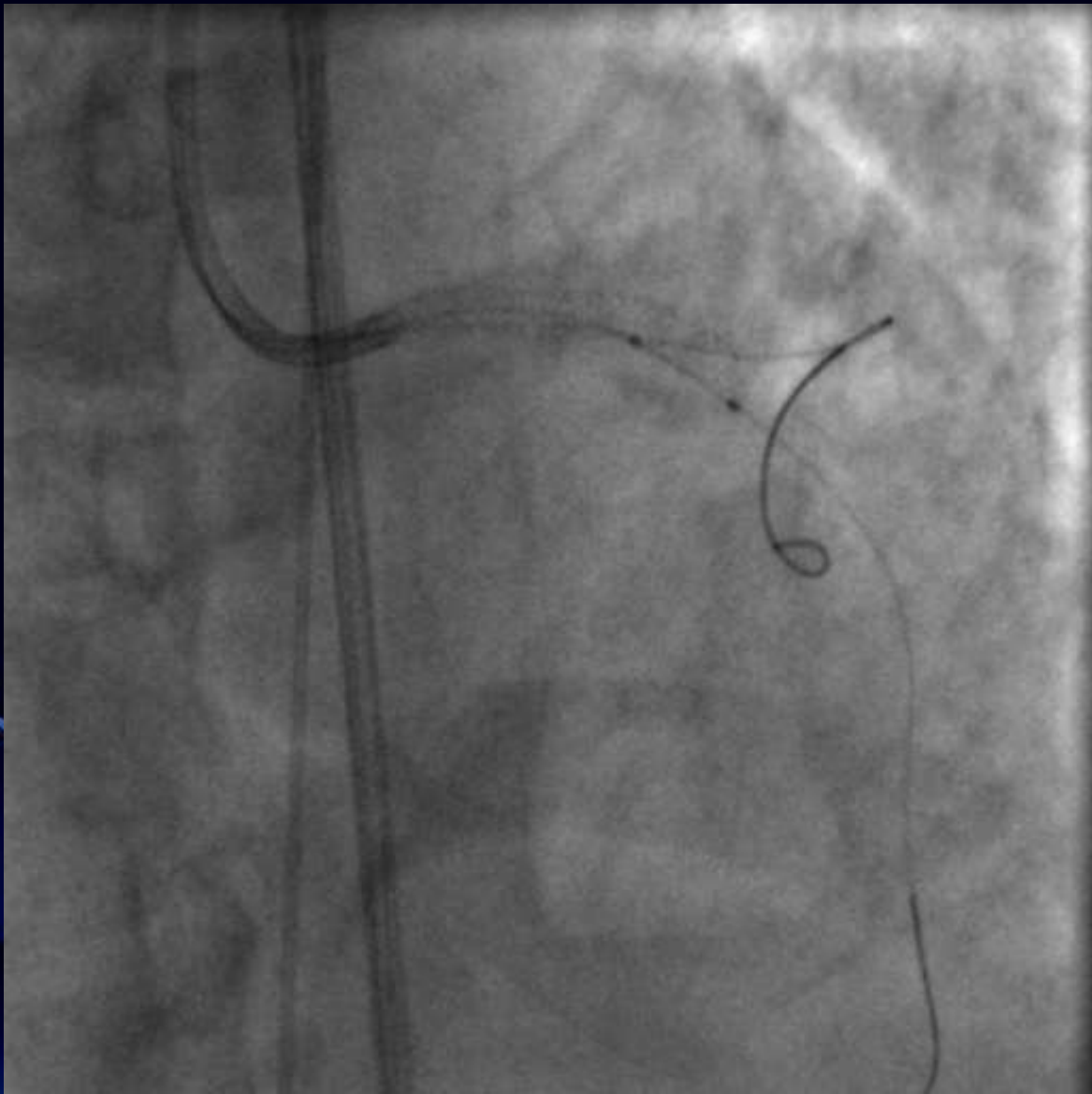


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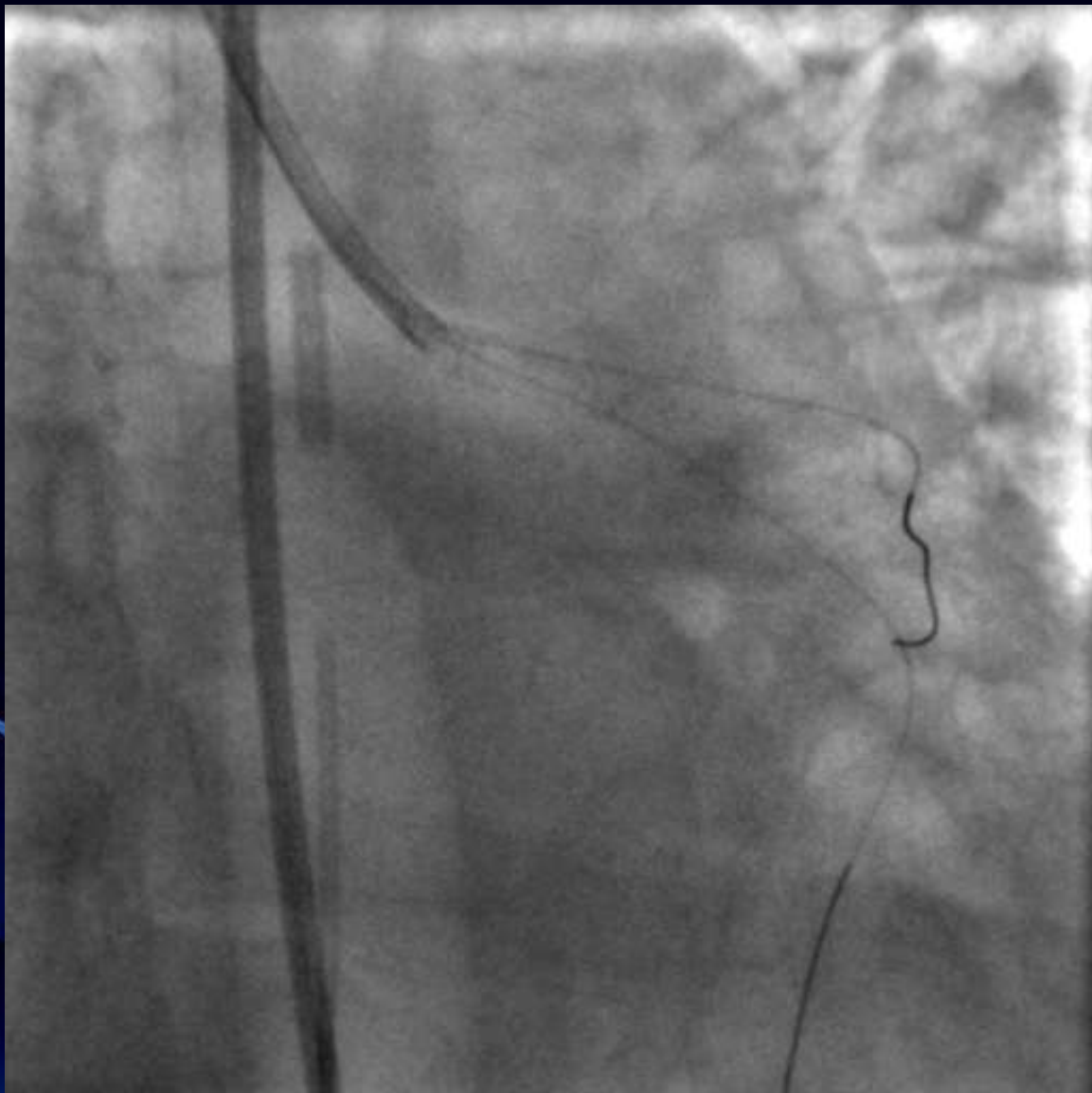
**Due to the proximal sealing of the dissection, there was flow improvement in the LAD.**





Thereafter, an Asahi Pro Water guide wire, easily crossed the struts of the stent and was placed to the distal LAD, followed by inflations of a Sapphire) 2.5x15mm balloon at the ostium and proximal of the LAD.

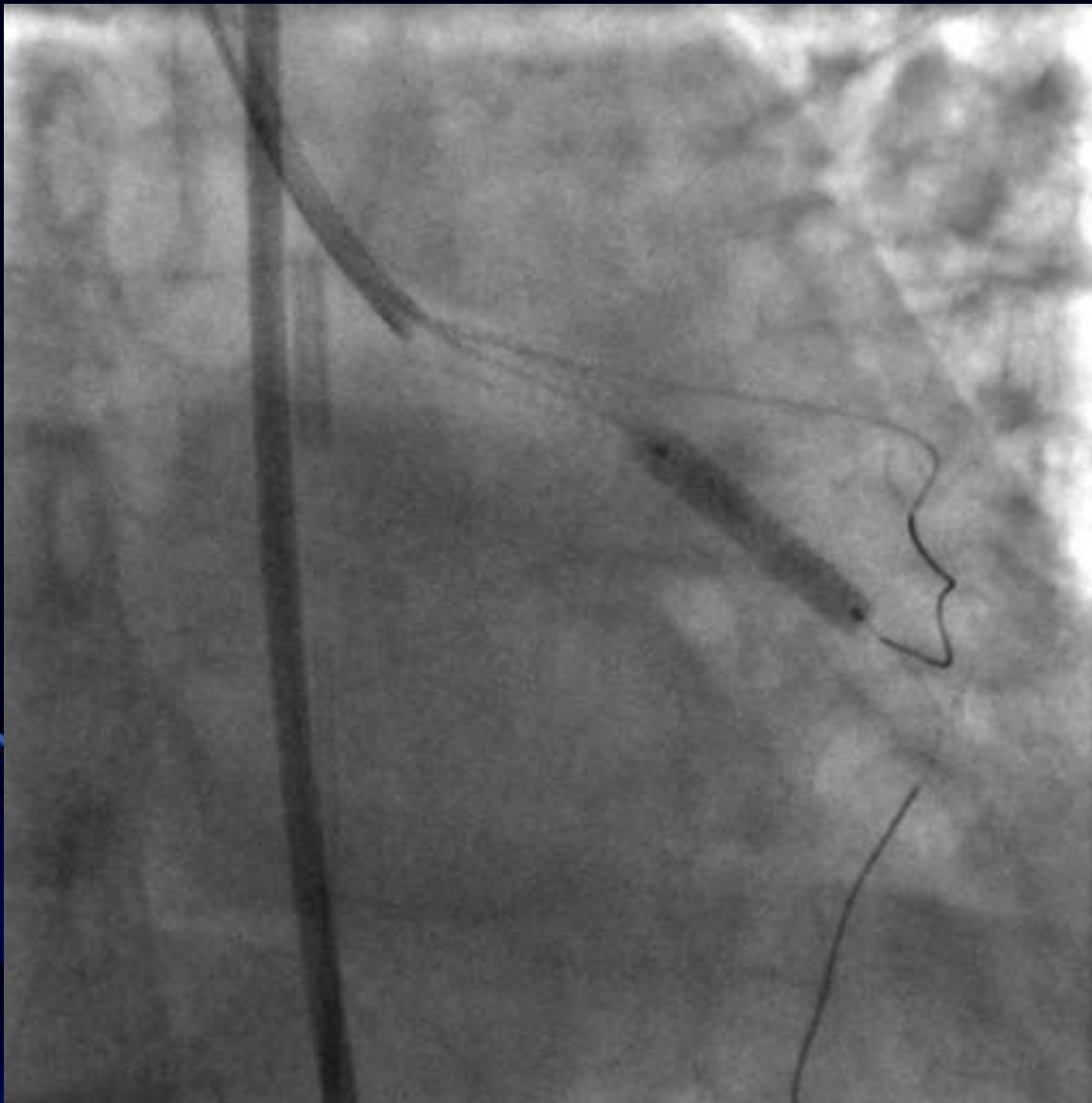




**Residual stenosis  
distal to the implanted  
stent of the Cx.**



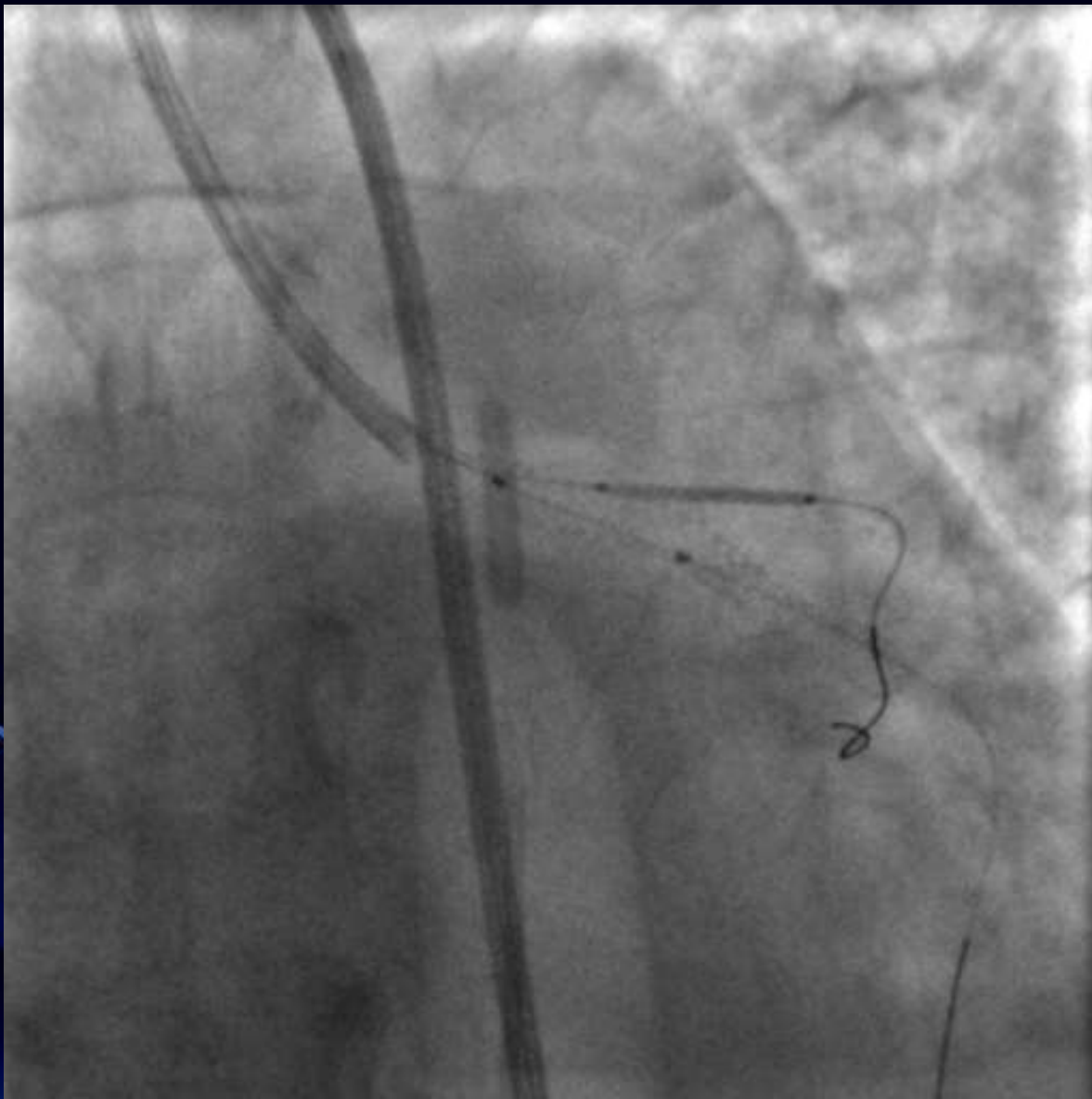
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**A second Taxus Element  
3.0X16mm.**



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**The procedure was concluded by placing a Taxus Element 3.0X16mm stent, into the LAD, with reverse mini crush technique.**

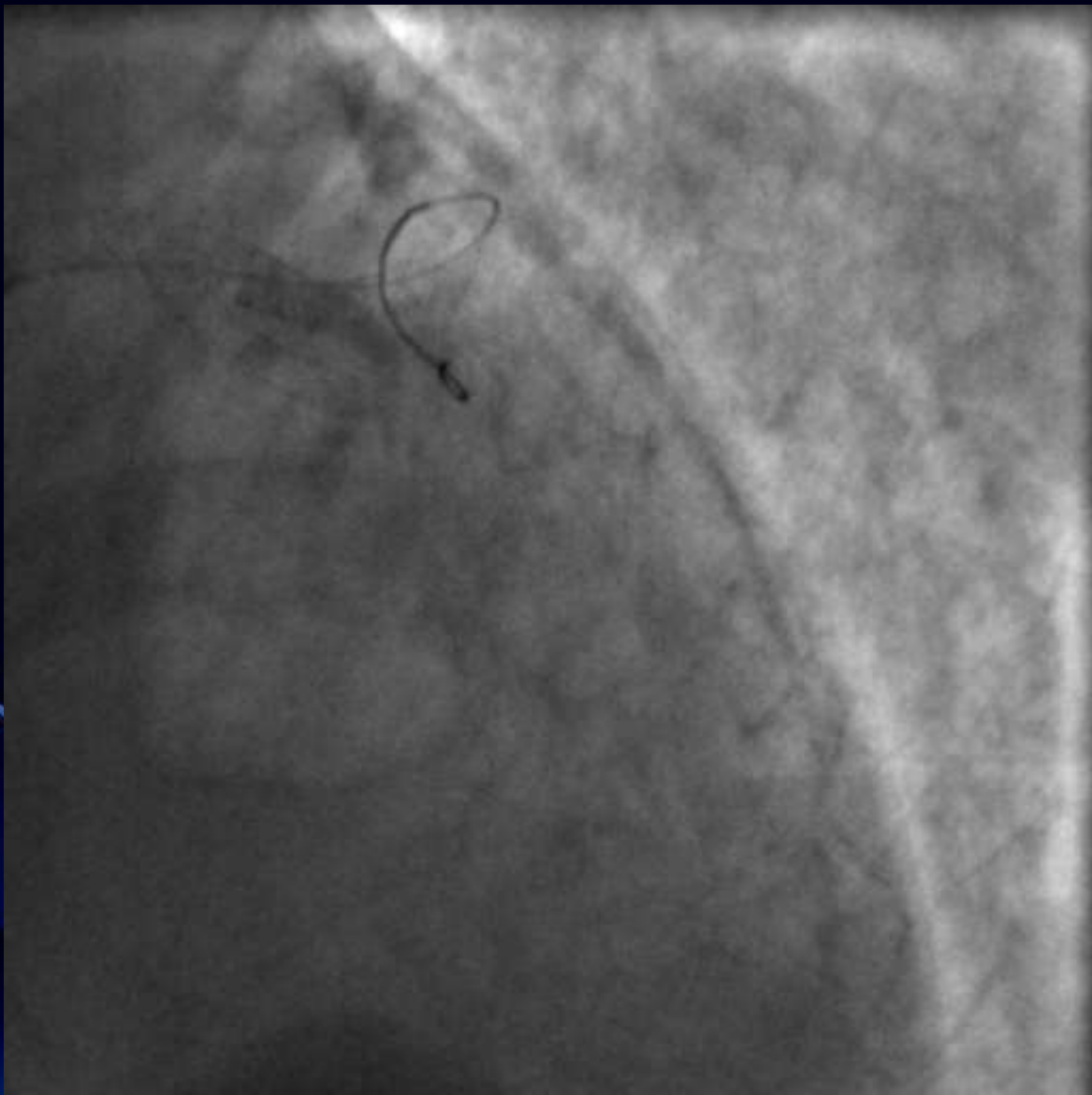




**Mini-crush with  
inflation of Quantum  
4.0x15mm.**



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**Final result.**



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**On hospital discharge (day 8), she was advised to continue post-stent antithrombotic regimen (oral aspirin and clopidogrel) and in addition, ACE inhibitors and beta-blockers.**

**Echocardiography at 1 month showed a nondilated left ventricle with anteroseptum and apex hypokinesia. Her ejection fraction was 35-40% with a moderate mitral regurgitation.**



The overall incidence of SCAD in angiographic series ranges from 0.07% to 1.1%. This is likely to be an underestimation, since in a significant number of published cases the diagnosis was only made at autopsy. The mean age at presentation is 35 to 45 years , 70% of the cases occur in women and in a recent study by Vanzetto et al in 11.605 patients, SCAD was observed in as many as 1 out of 10 women under the age of 50, presenting with ACS . One third of SCAD cases occur in the peripartum period. Although it may manifest up to 12 weeks post-partum, the peak incidence is in the second week after delivery . In contrast, men usually present later in life and more frequently have associated risk factors for atherosclerosis.

The LAD is the most common culprit vessel in women, whereas in men there is a higher proportion of RCA involvement . Independent of gender, LAD is affected in 75% of cases and RCA in 20% of cases. Multivessel involvement has also been described predominantly in women.



Variant angina , cocaine and methamphetamine abuse have been associated with spontaneous dissection. Furthermore, severe hypertension , vigorous exercise . In the minority of cases, SCAD have been associated with connective tissue disorders, such as Marfan's syndrome, Ehlers-Danlos type IV syndrome and lysyl oxidase deficiency . There have also been reports of spontaneous dissection in patients with systemic lupus erythematosus , antiphospholipid syndrome , polyarteritis nodosa, inflammatory bowel disease , isolated eosinophilic arteritis, fibromuscular dysplasia and sarcoidosis . Finally, medications such as cyclosporine , 5-fluorouracil , and fenfluramine have also been associated with SCAD. In the majority of cases though, an underlying condition predisposing to SCAD cannot be identified and therefore it is classified as idiopathic. In our case there were no signs of atherosclerotic coronary artery disease, the patient denied any substance abuse , hence she was assigned to the idiopathic group.

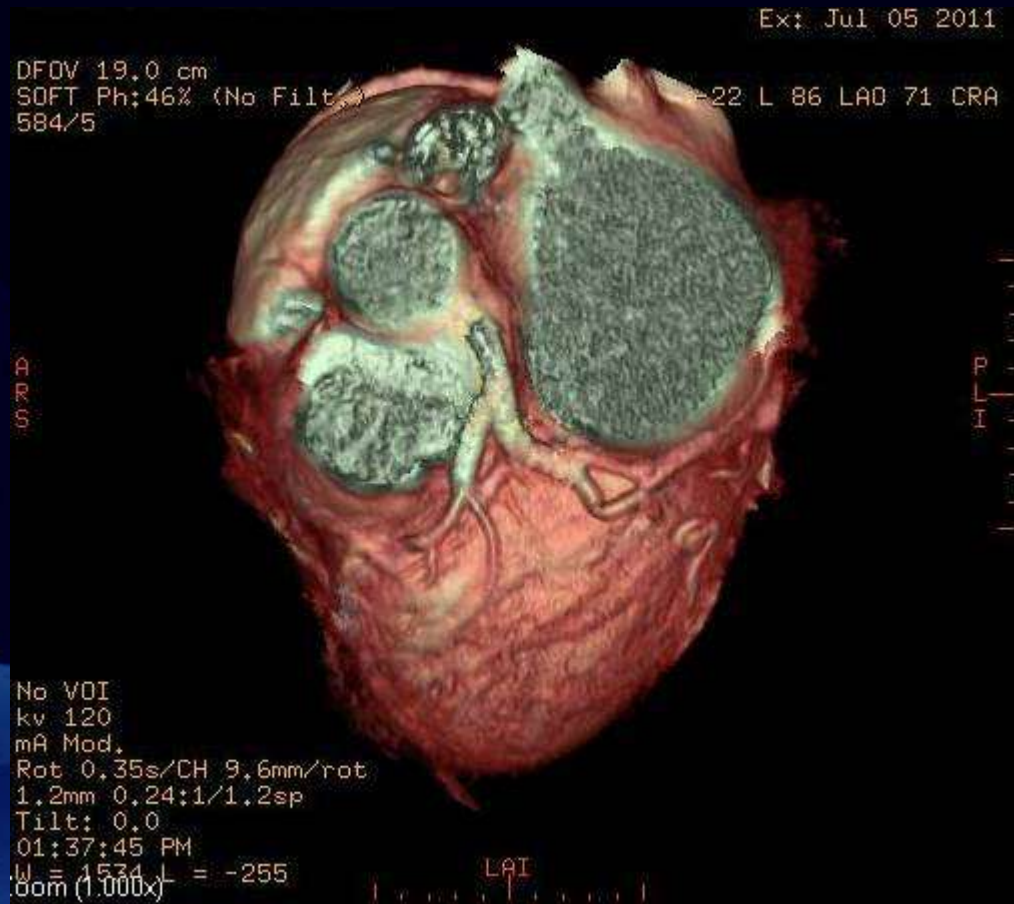




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