

David and Goliath

A case of coronary artery ectasia

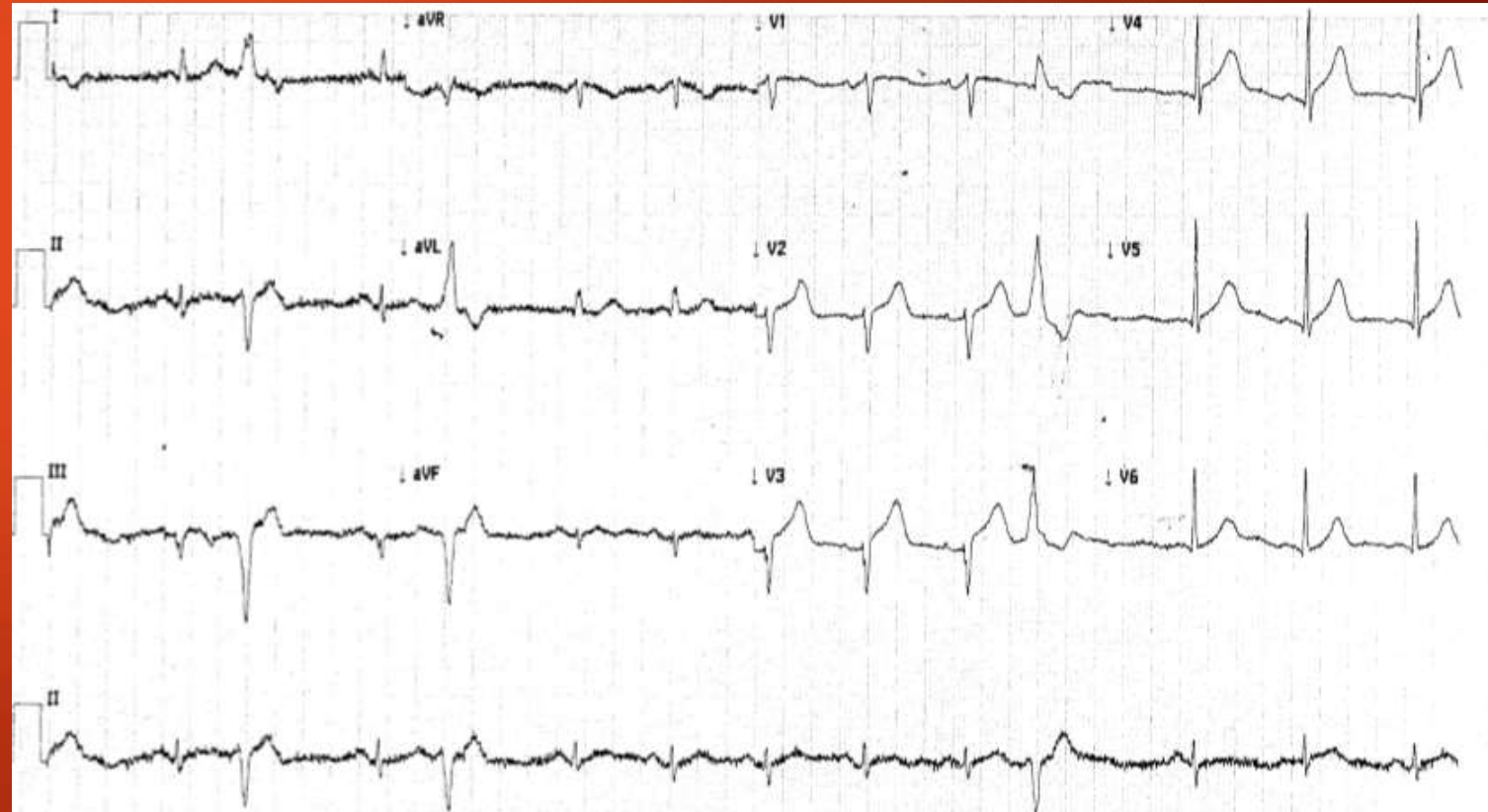
DR. YH CHENG

POK OI HOSPITAL



M / 64

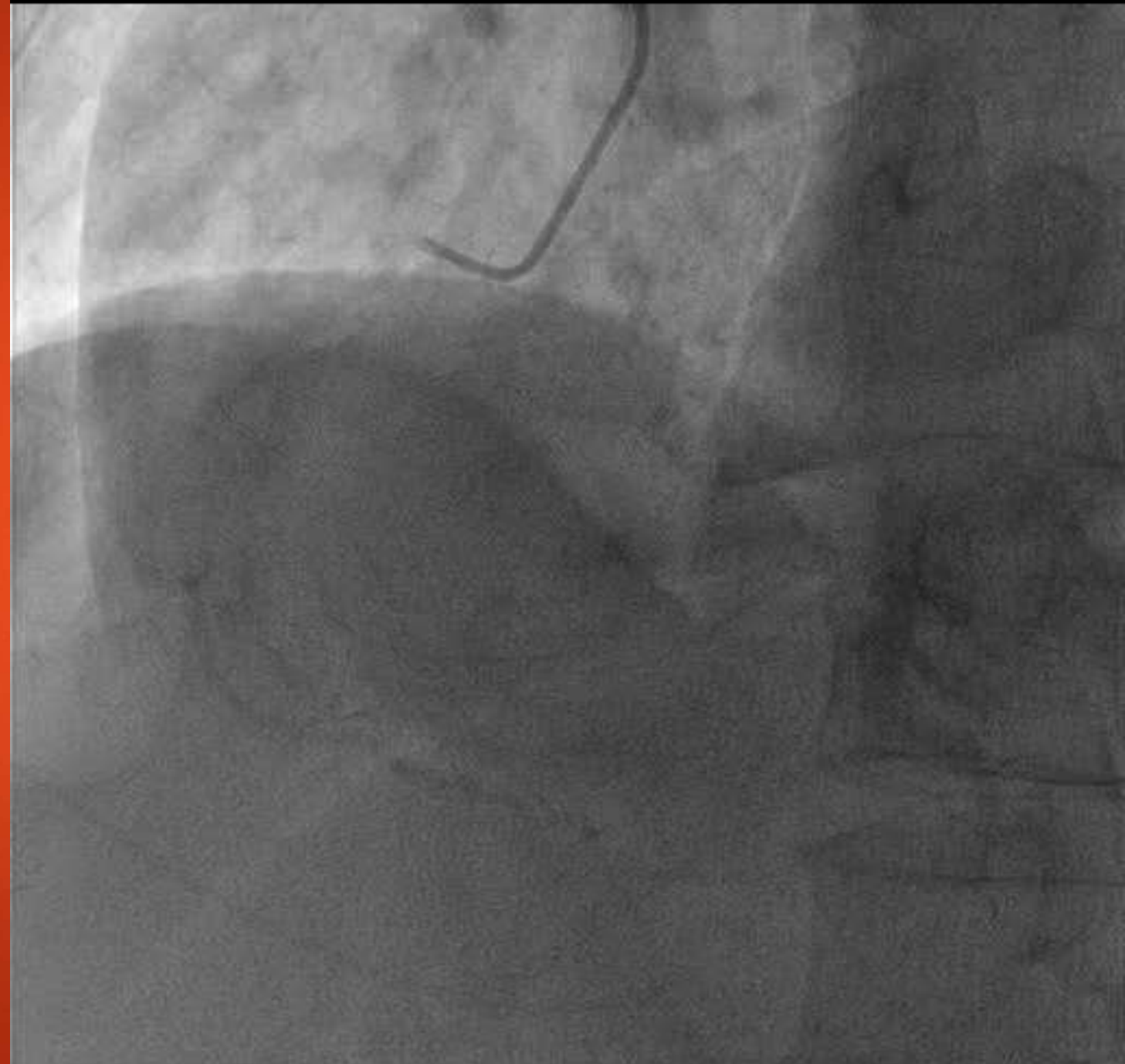
- ▶ NKDA
- ▶ NSND
- ▶ GPH
- ▶ Sudden onset of chest pain with cold sweating
- ▶ BP 90/46 P 80
- ▶ In persistent pain
- ▶ Sweaty



M / 64

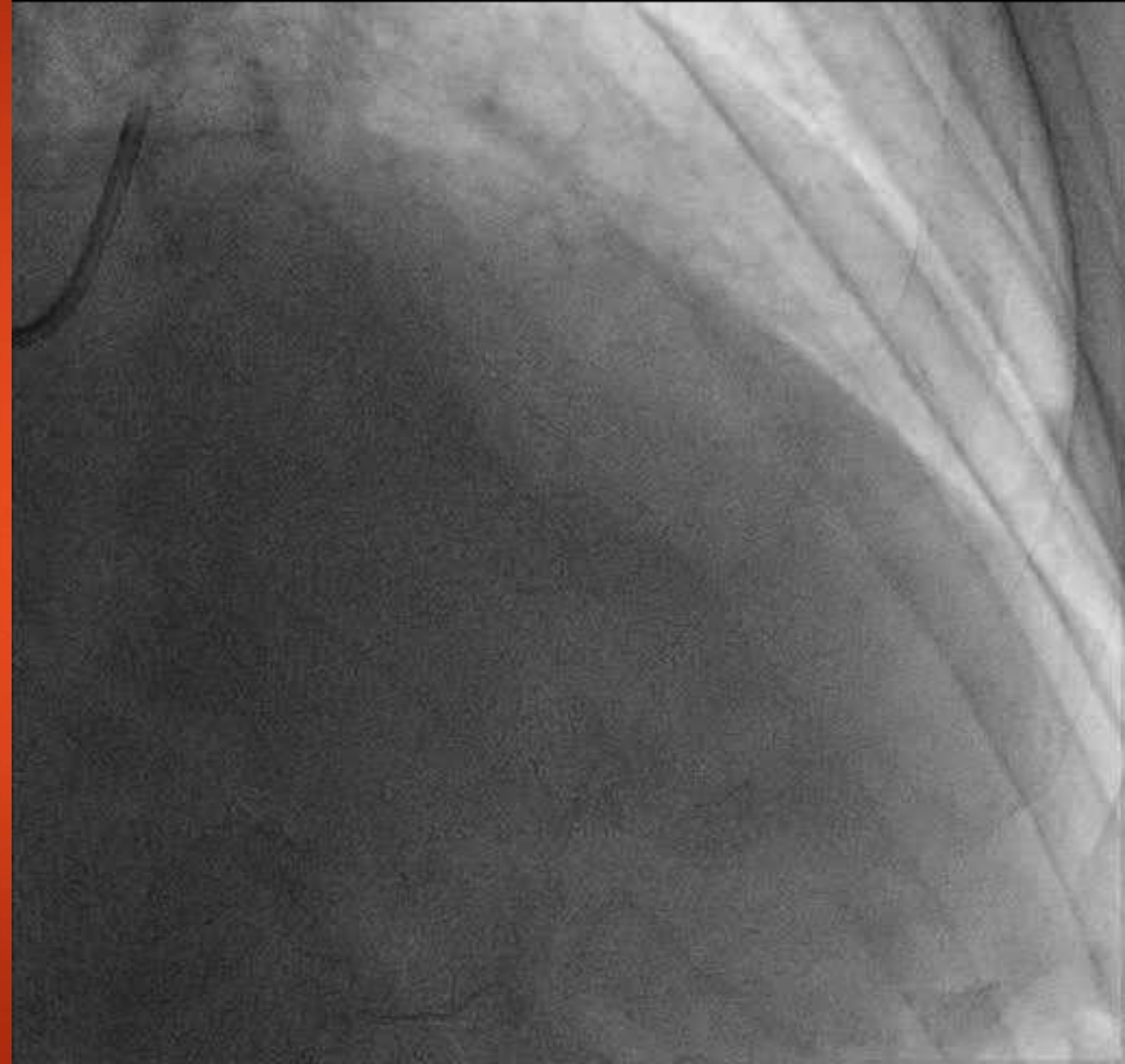
- ▶ Brought in for primary PCI

RCA



LAD

▶ IC integrilin bolus



Ballooning

- ▶ Sapphire II PRO 2.0/15
- ▶ Pantera PRO 3.0/15
- ▶ Sapphire II PRO 3.5/15



Aspiration

- ▶ Stemicath aspiration
- ▶ Yielded red thrombus

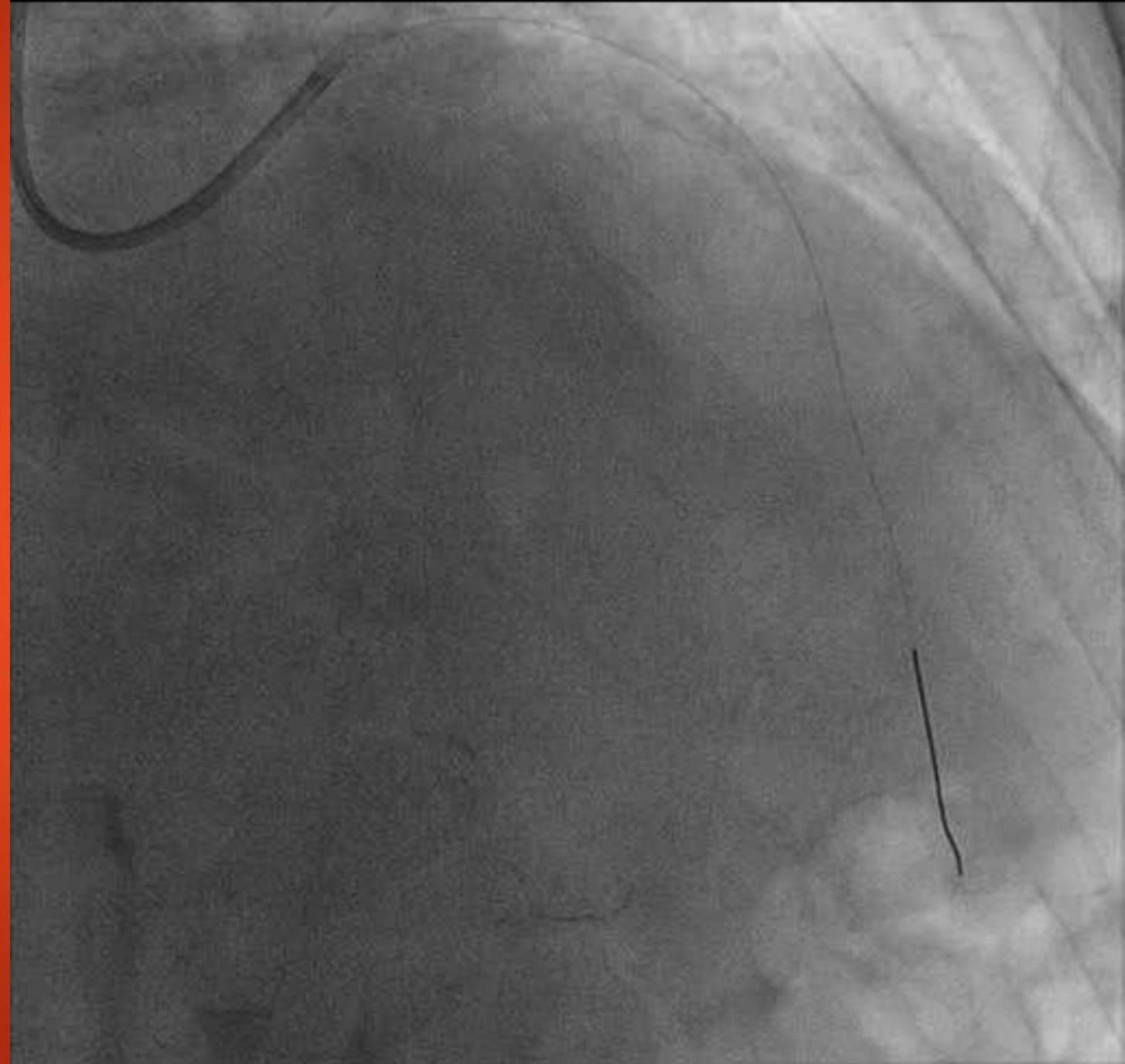


Lossy compression - not intended for diagnosis

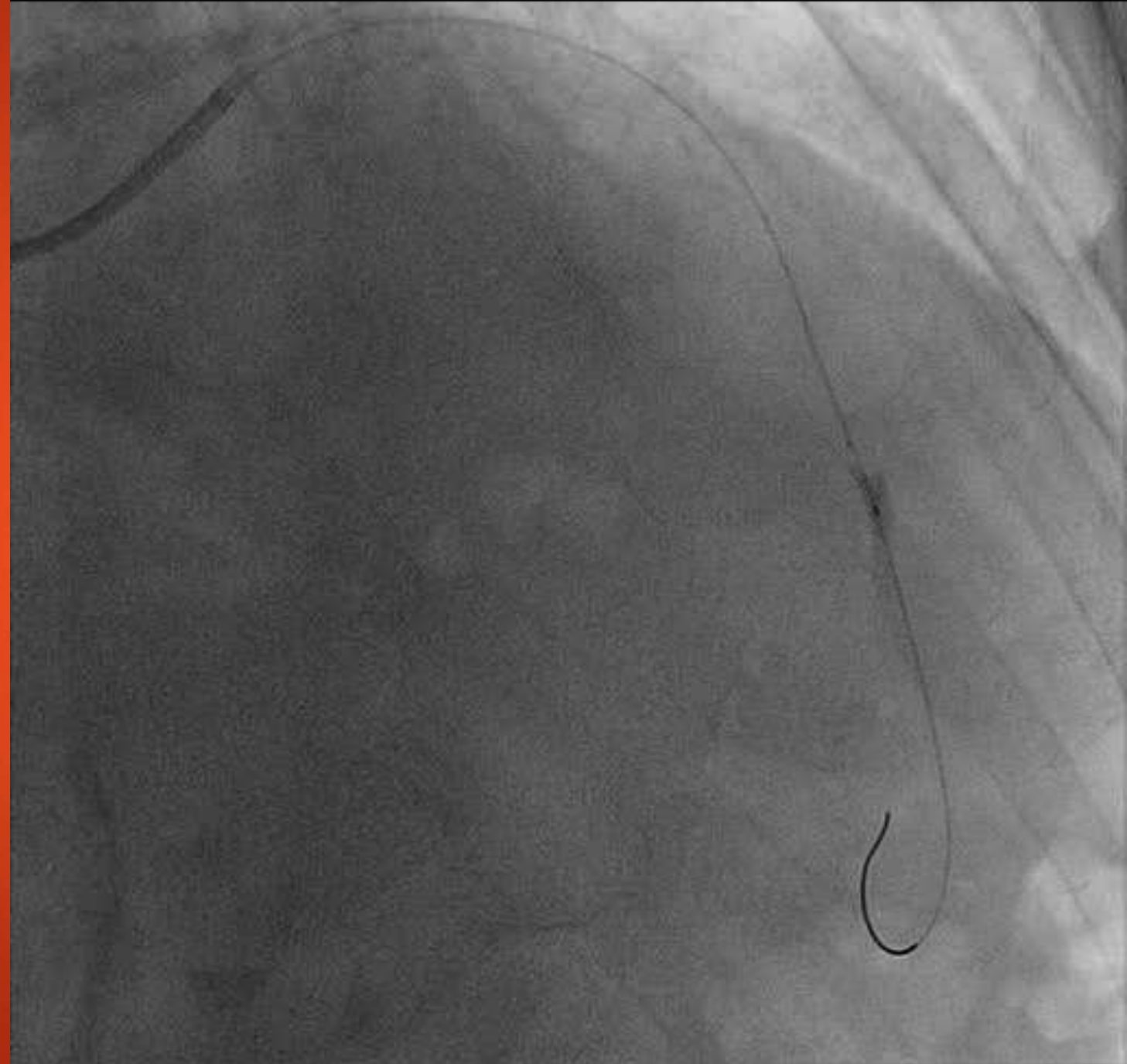


Post aspiration

Lossy compression - not intended for diagnosis



- ▶ Selective injection confirms true lumen with side branches



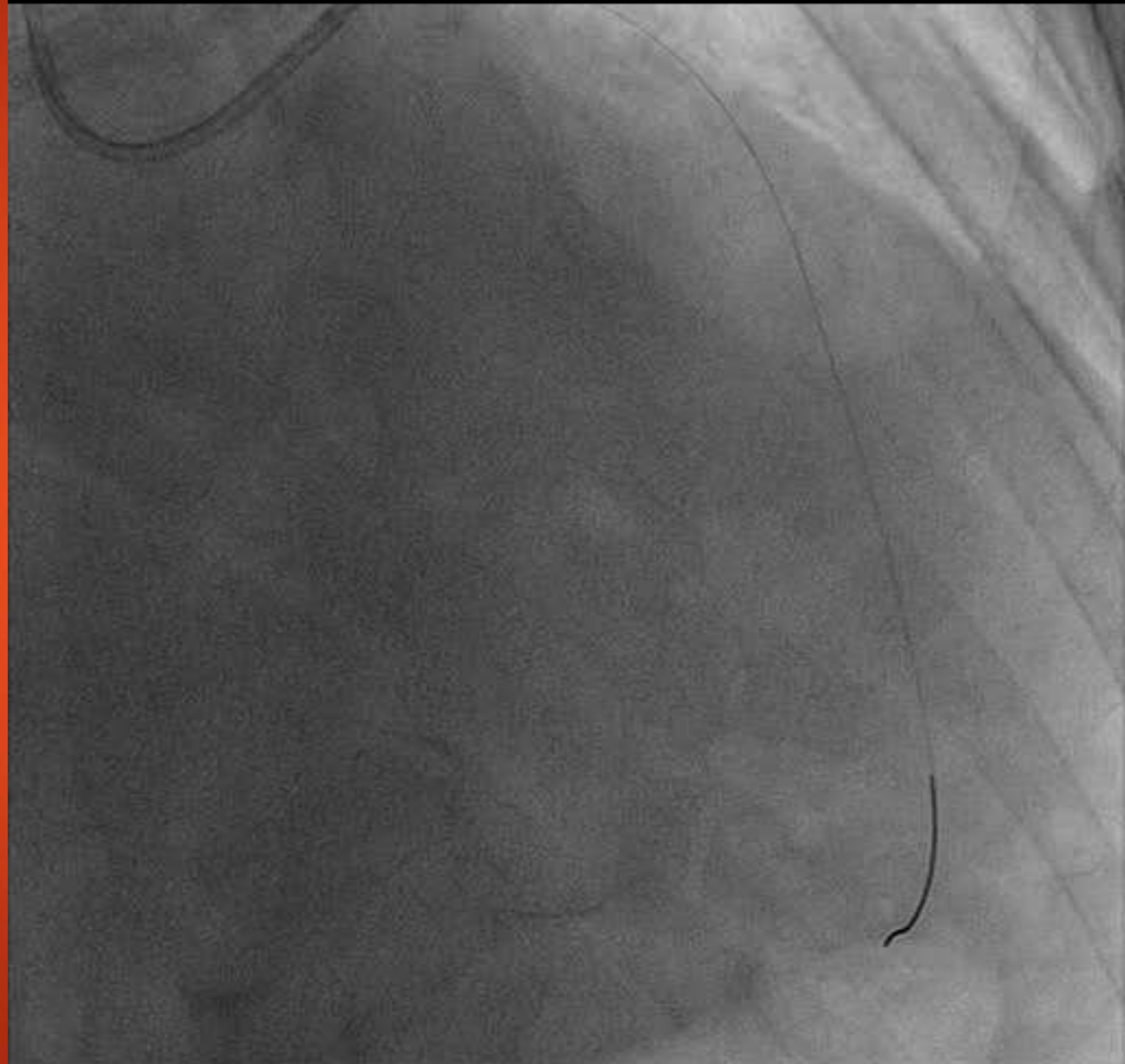
Aspiration

- ▶ Further aspiration with F6 guideliner

Lossy compression - not intended for diagnosis



▶ IC TNK



What is your next step?

- ▶ A) Further aspiration
- ▶ B) Stenting
- ▶ C) Escalate dose of IC thrombolytic
- ▶ D) Refer cardiothoracic surgery

Stentys



Xposition S

Sirolimus-eluting Self-Apposing[®] Coronary Stent System



Why use a Self-Apposing stent in vessels with a heavy thrombus load?

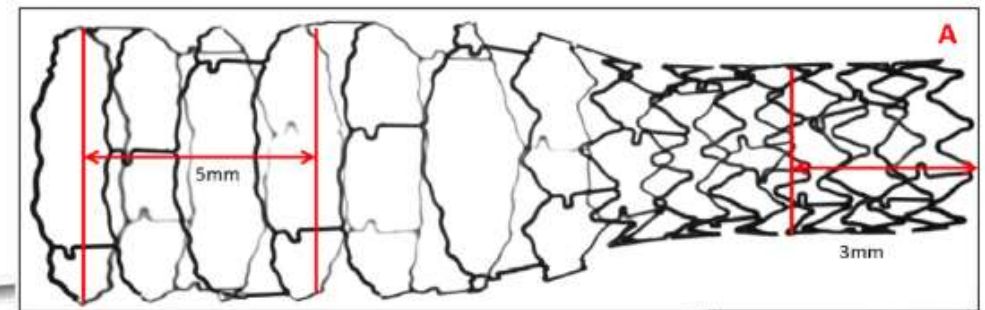
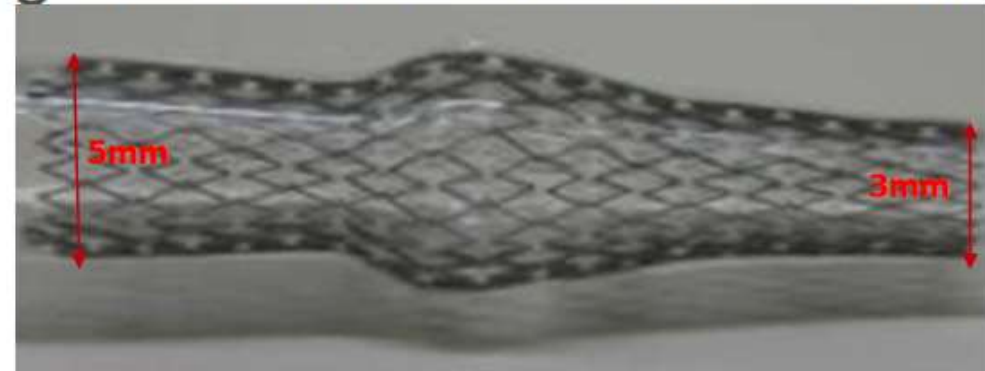



A Self-Apposing stent will actively adapt to the increased lumen diameter caused by thrombus absorption over time.

Heavy thrombus and spasm may also obscure the true vessel dimensions, the sizing flexibility of a Self-Apposing stent means they will adapt to the true vessel dimensions as the thrombus dissolves


Why use a Self-Apposing stent in vessels with a diameter greater than 4.5mm?

A Self-Apposing stents are designed adapt to large diameters without losing their cell structure, maintaining their scaffolding effect and drug elution into the vessel wall.







1 - Stent is mounted on a semi compliant balloon and is restrained by a splitable Sheath



2 - Balloon inflation splits the sheath and releases the Self-Apposing® stent



3 - The balloon is then deflated leaving the 0.0032" sheath between the stent and the vessel wall



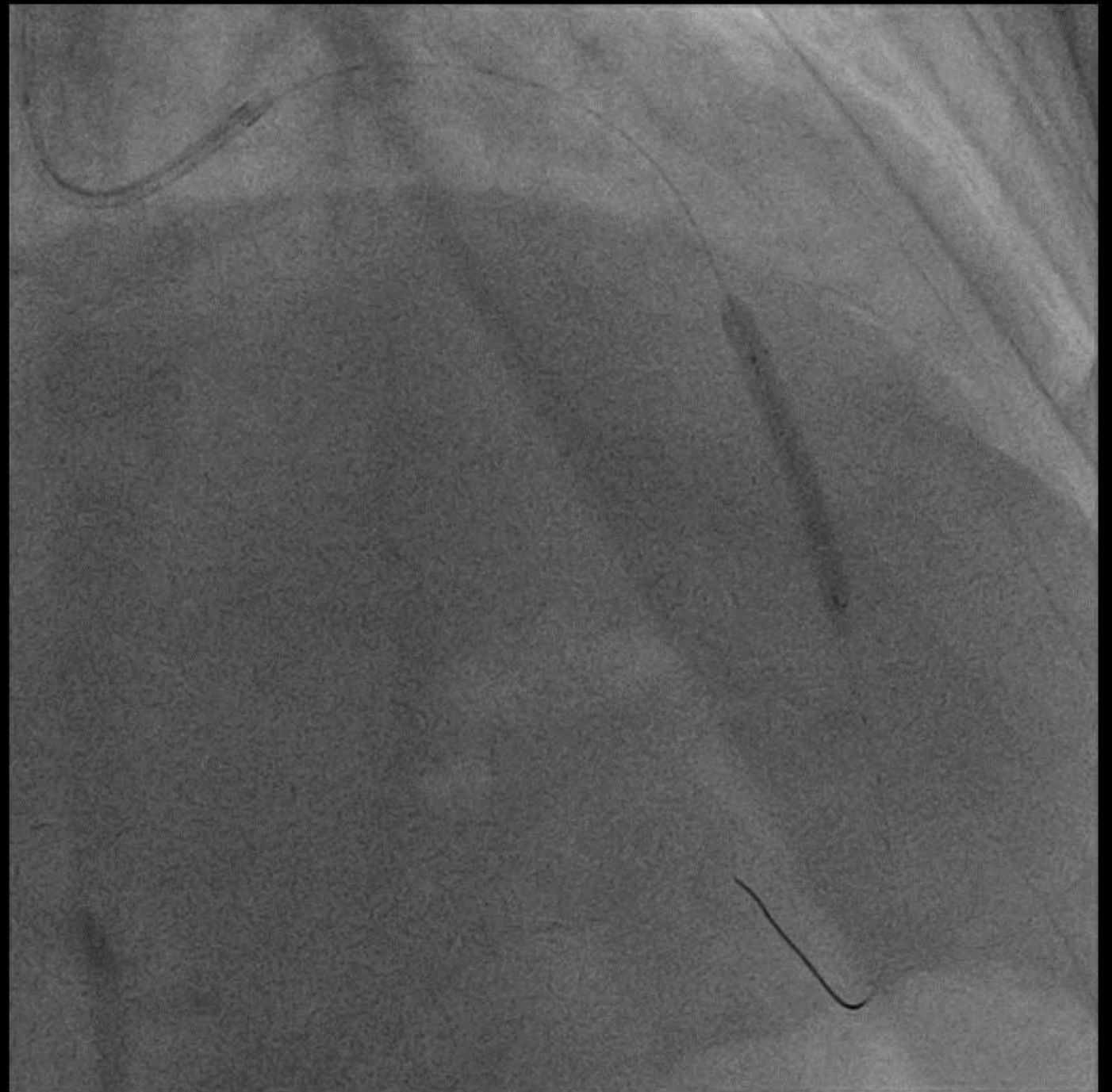
4 - The balloon and sheath are then withdrawn leaving the stent apposed to the vessel wall
The two radiopaque stent markers are located at the edges of the stent

6F Guiding Catheter compatible
Distal Crossing Profile

- 0.056" (1.42 mm) for Large system
- 0.051" (1.3 mm) for Medium / Small systems

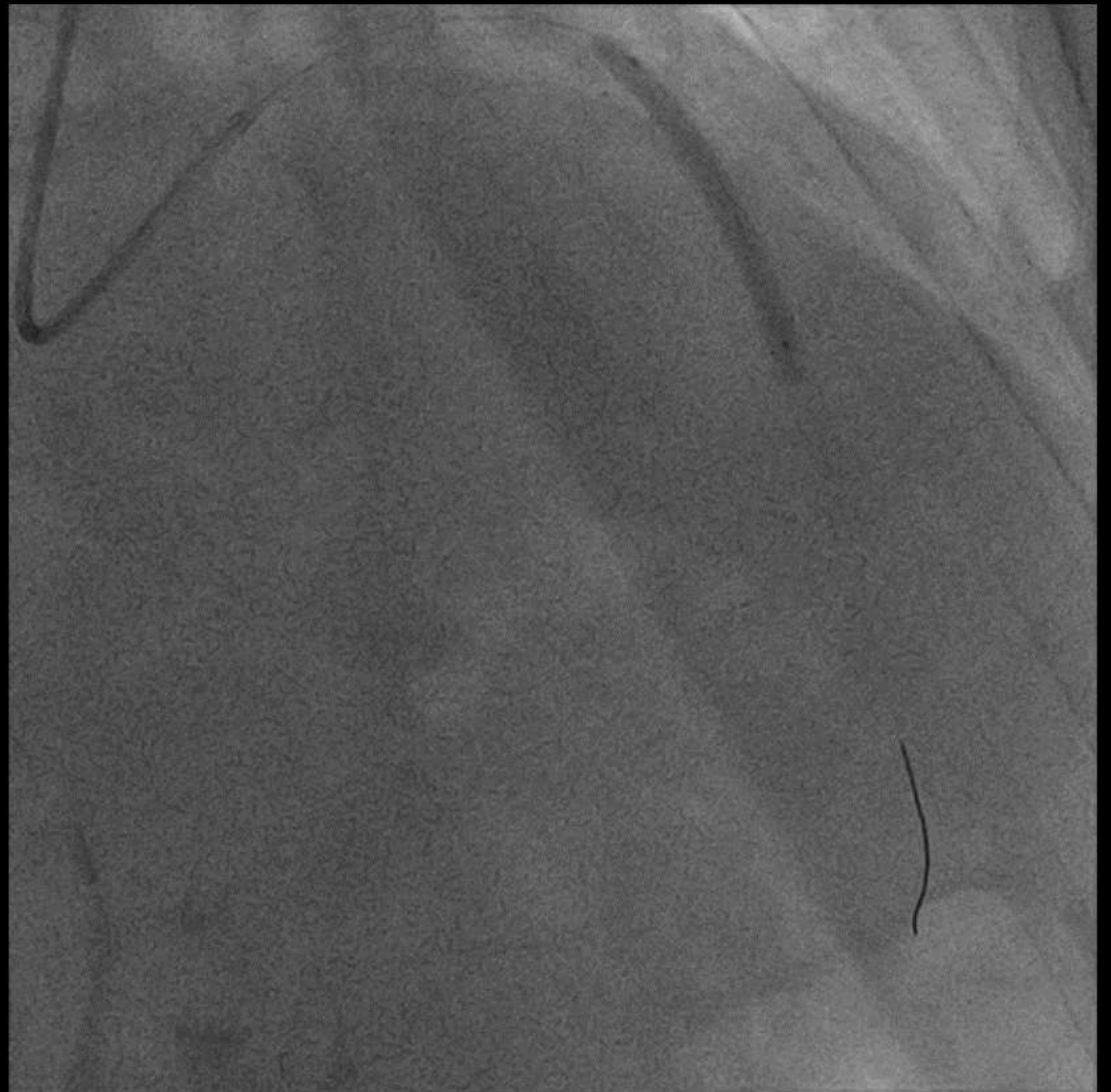
Stenting

- ▶ Stentys L 27



Stenting

- ▶ Stentys L 37



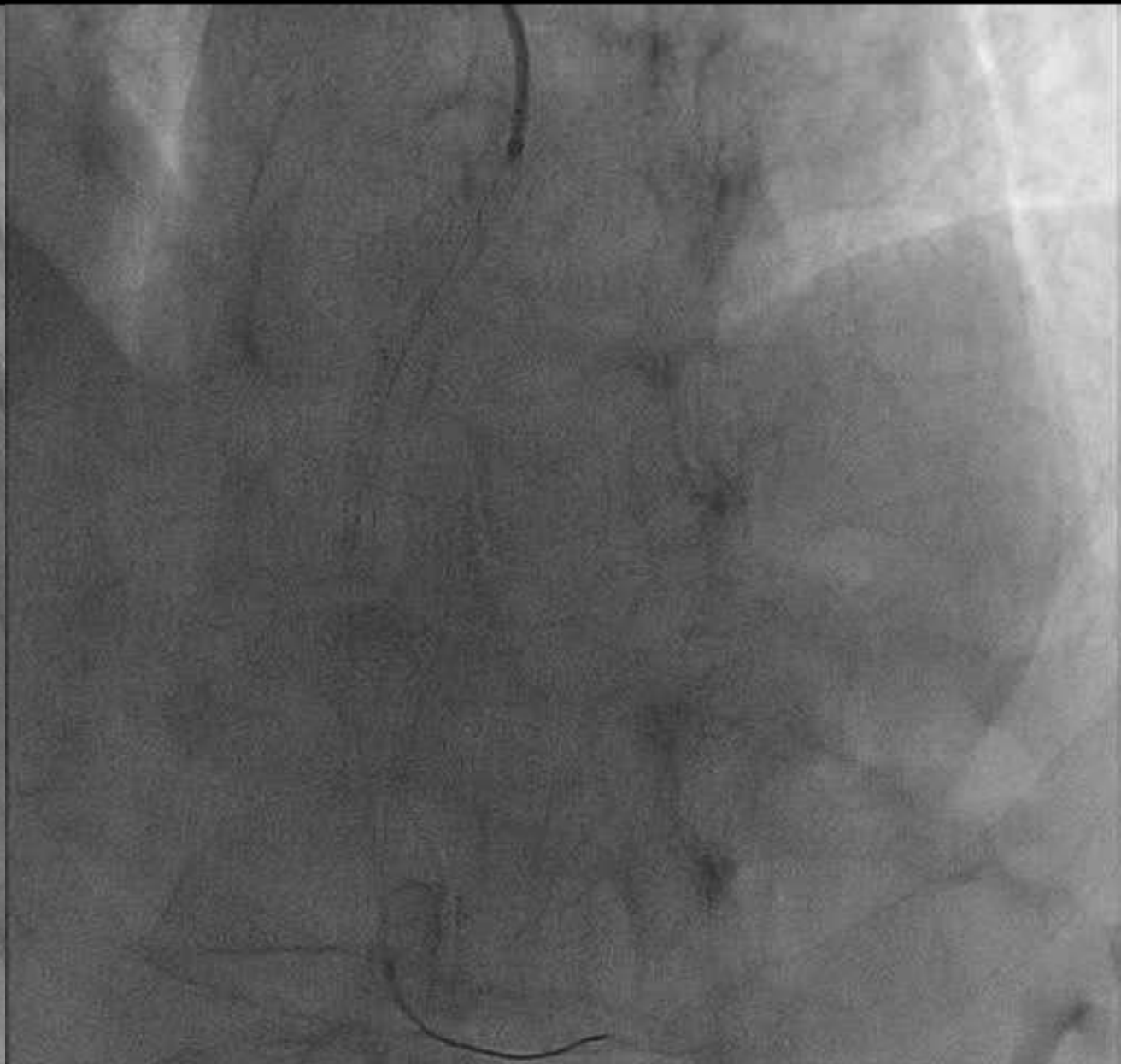
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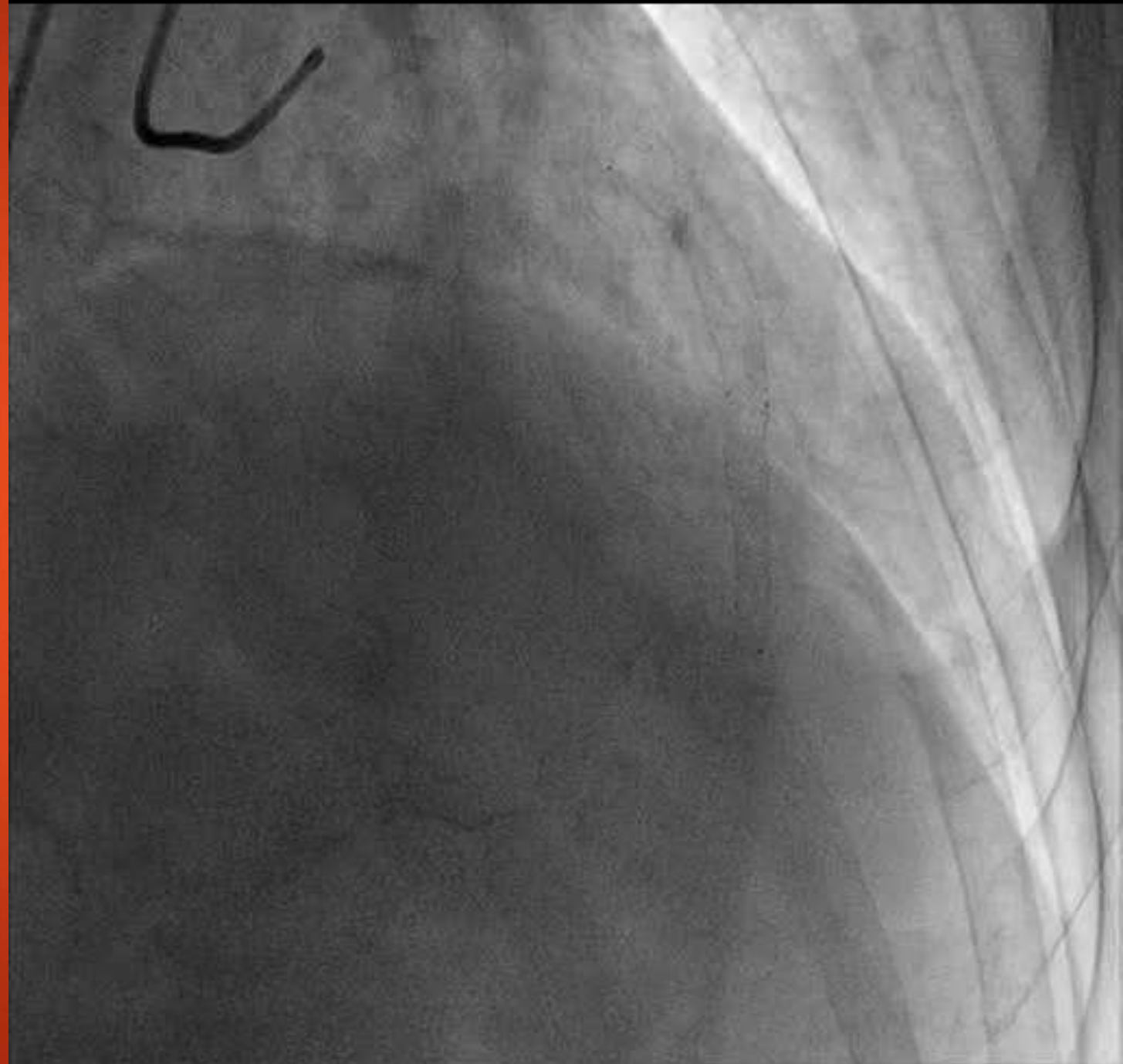


Post PCI treatment

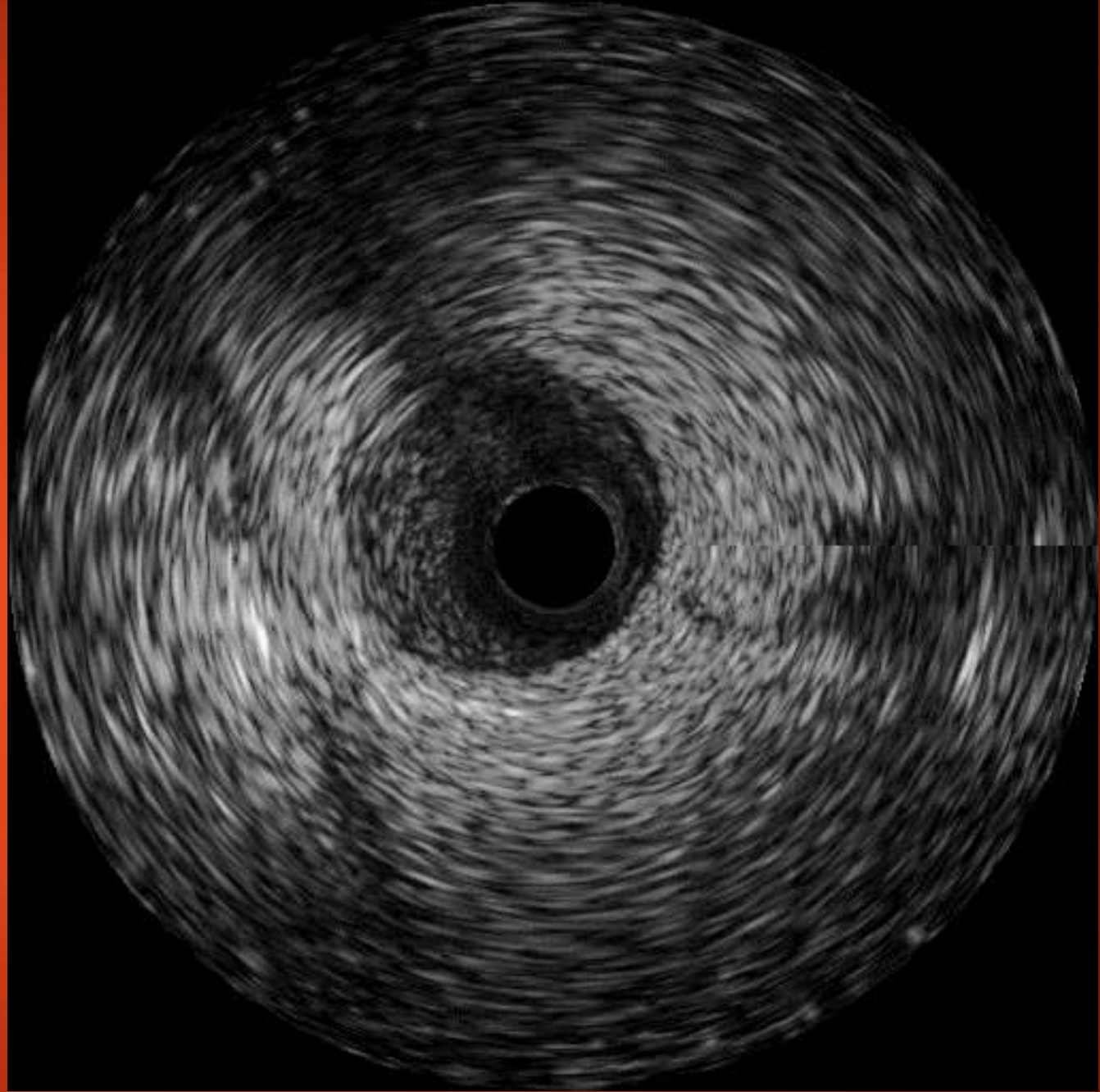
- ▶ DAPT (Aspirin / Plavix)
- ▶ IV integrilin infusion
- ▶ Lipitor / Pantoloc
- ▶ Apixaban 2.5 mg BD

Restudy after
3 months

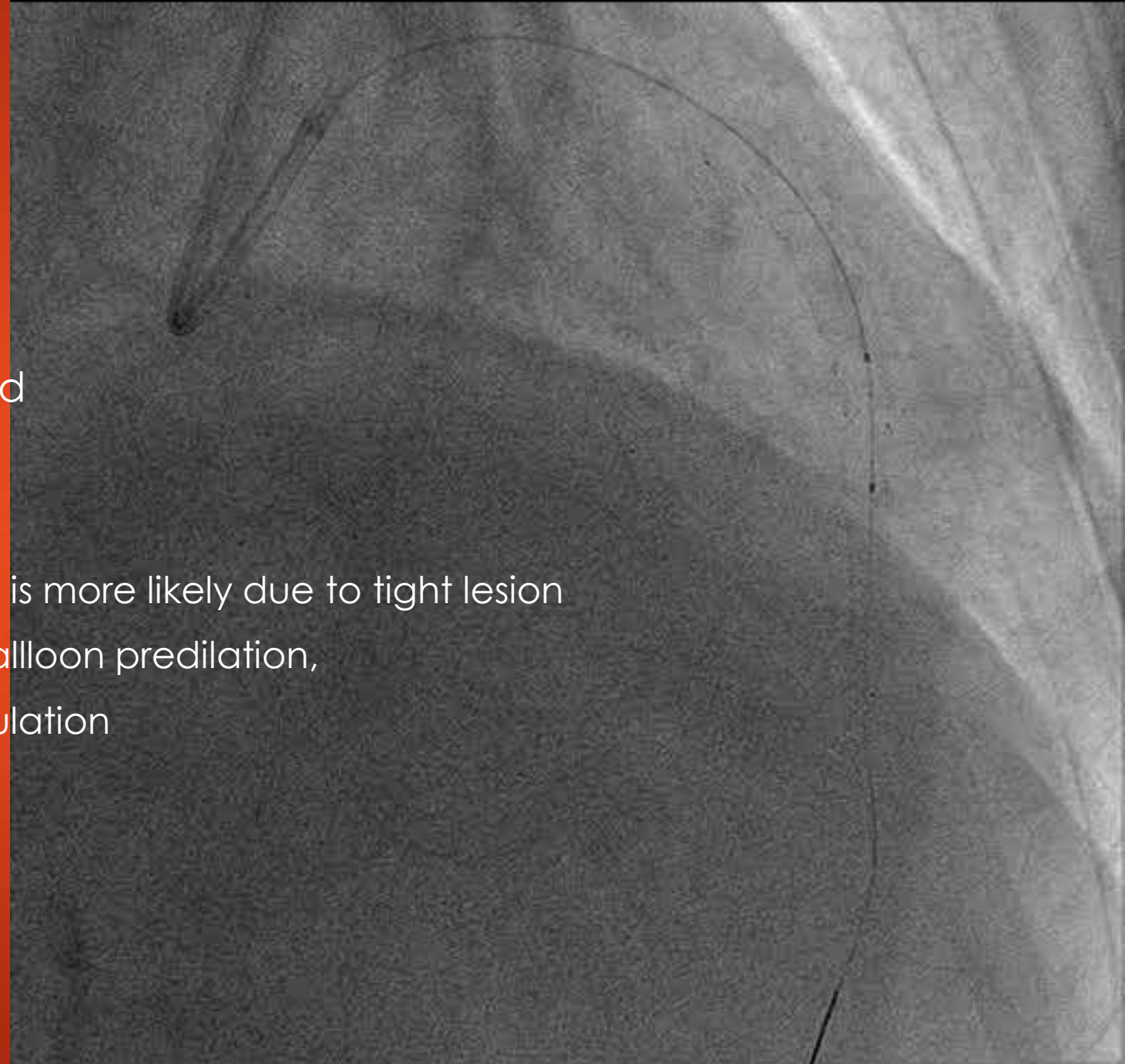
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IVUS

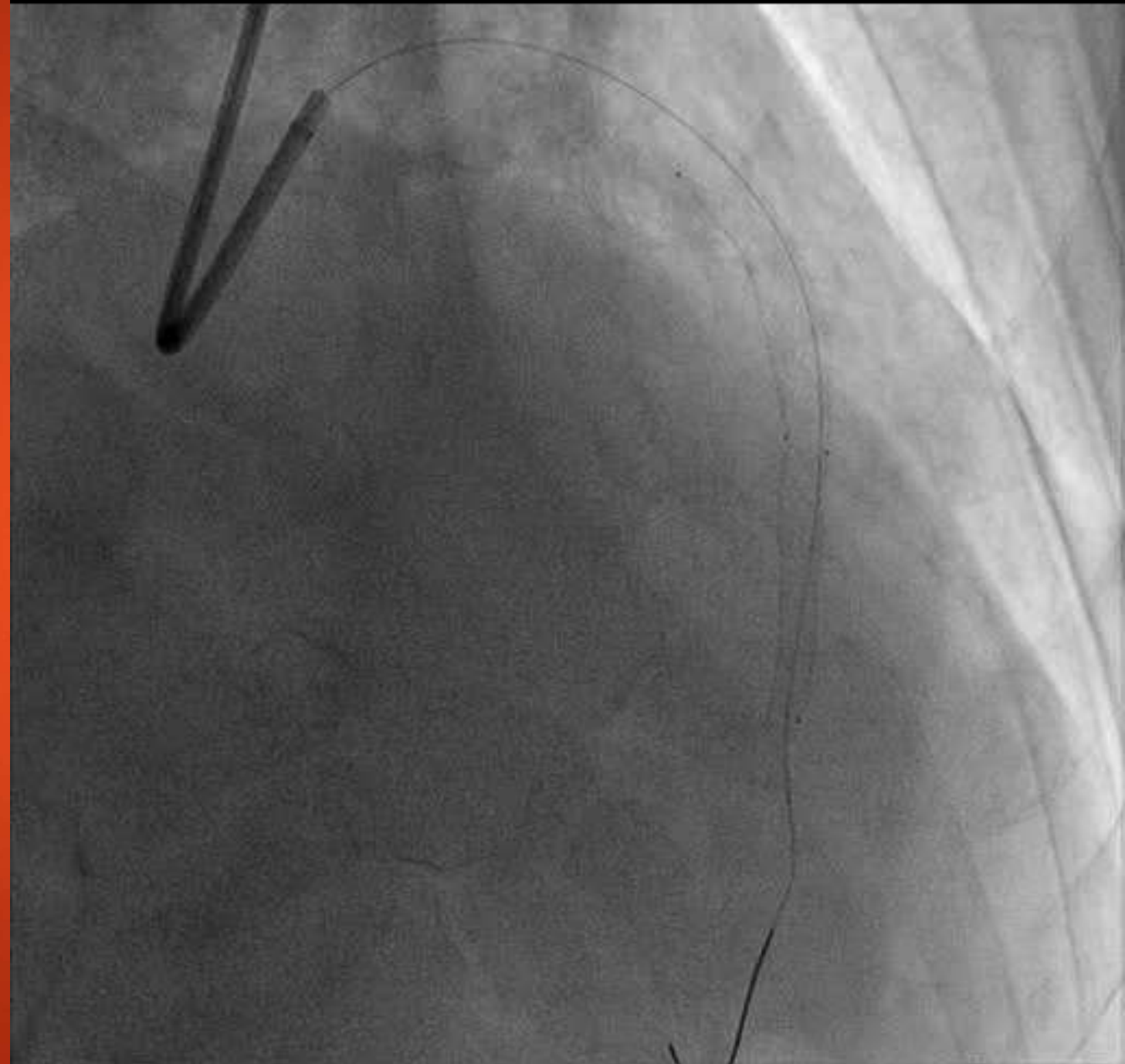


- ▶ Well apposed stent
- ▶ Organized thrombus was noted around the non-overlapping site
- ▶ Decide to try POBA
 - ▶ If flow improved, the slow flow is more likely due to tight lesion
 - ▶ If flow similar after small size balloon predilation, will consider further anti-coagulation
 - ▶ NC Emerge 4.0/15

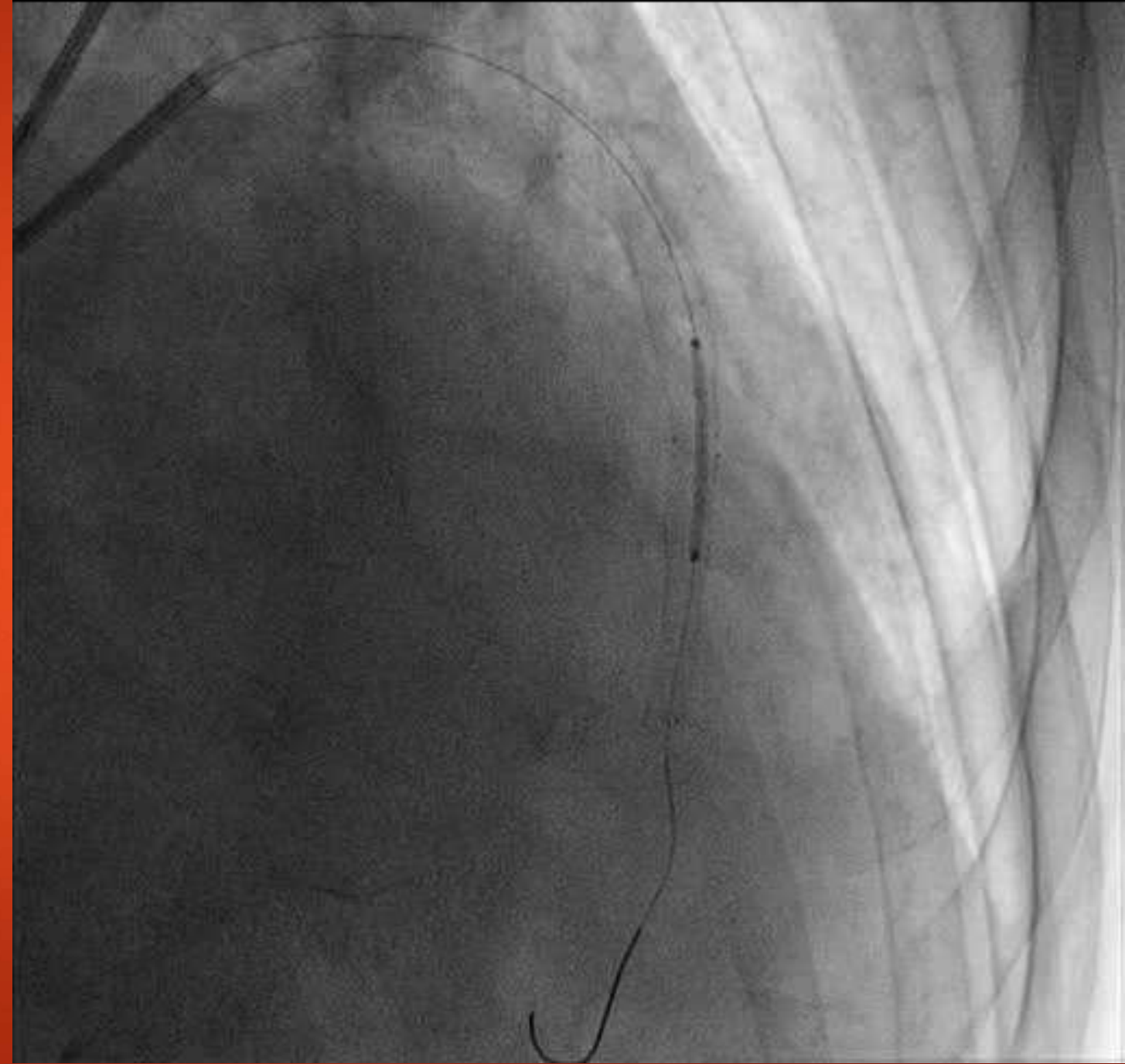


After POBA

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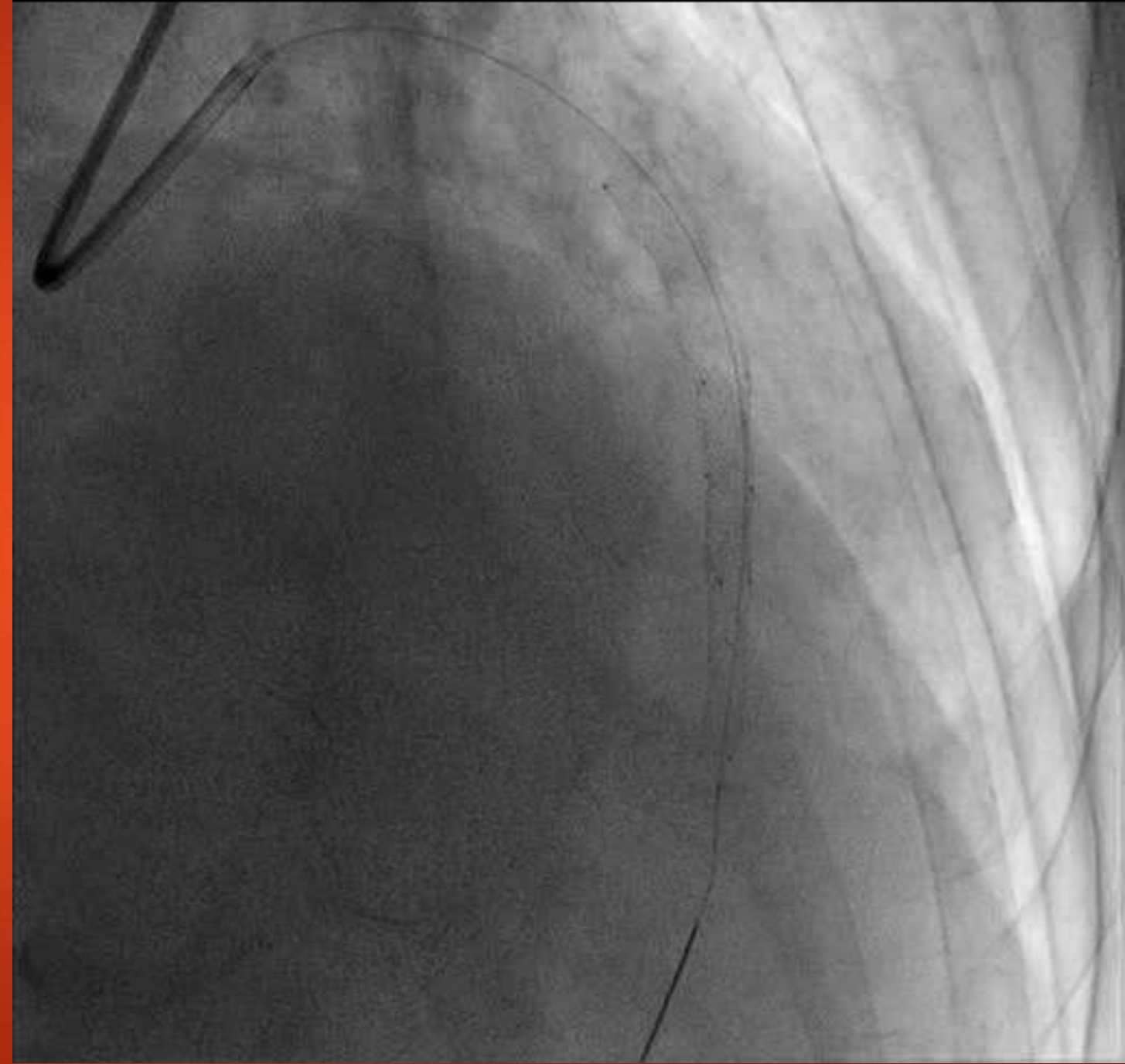


- ▶ Stentsys L/22
- ▶ IC integrilin then IV infusion



Final angiogram

Lossy compression - not intended for diagnosis



Coronary Artery Ectasia

- ▶ Localized or diffuse dilatation of coronary artery lumen > 1.5 x of adjacent normal vessel
- ▶ 0.3% - 4.9% of patients undergoing angiography
- ▶ Pathophysiology unclear
- ▶ Proposed mechanisms include
 - ▶ Atherosclerosis ($>50\%$ of adult cases)
 - ▶ Inflammatory vasculopathy (eg. Kawasaki disease)
 - ▶ Connective tissue disease (eg. RA, SLE)
 - ▶ Collagenopathies (eg. Marfan's syndrome)
 - ▶ Congenital

Markis classification of CAE

Type of CAE	Definition
Type 1	Diffuse ectasia of 2 or 3 vessels
Type 2	Diffuse ectasia in one vessel and localized disease in another
Type 3	Diffuse ectasia in one vessel only
Type 4	Localized or segmental involvement

Presentation of CAE

- ▶ No typical presentation
- ▶ Incident findings on CTCA / MRI / coronary catheterization
- ▶ CAE without significant stenosis may still have angina, +ve stress test, ACS

Treatment of Coronary Artery Ectasia

SCIENTIFIC LETTER

Hellenic J Cardiol 2010; 51: 158-163

Clinical profile and outcome of coronary artery ectasia

Y Gunes, B Boztosun, A Yildiz, A Metin Esen, M Saglam, M Bulut, H Karapinar, C Kirma

Heart 2006;92:1159-1160. doi: 10.1136/hrt.2005.069633

agnosis

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Coronary artery ectasia: diagnosis and treatment

An article from the e-journal of the ESC College of Practising Physicians

Vol.8,Nº15 - 16 Dec 2009



Sophie Mavrogeni, FESC

Coronary artery ectasia (CAE) represents a form of atherosclerotic coronary artery disease seen in 3-8% of patients undergoing coronary angiography. The presence of ectatic segments produces sluggish blood flow with exercise-induced

coronary artery disease. Only 10% to 20% of cases of CAE have been described in association with inflammatory or connective tissue diseases.^{2,8} Coronary dilatation has been described as isolated ectasia,⁹ in association with connective tissue disorders

Coronary artery ectasia (CAE) represents a form of atherosclerotic coronary artery disease, seen in 3-8% of patients undergoing coronary angiography, alone or in combination with stenotic lesions. The presence of ectatic segments contributes to sluggish blood flow and can promote exercise-induced angina and myocardial infarction, regardless of the severity of stenotic lesions. In isolated CAE, prognosis is better and anti-platelet drugs are the mainstay of treatment.

Treatment of Coronary Artery Ectasia

- ▶ No consensus
- ▶ Aspirin is logical as likely other concomitant coronary artery disease
- ▶ Statins may play role in inhibiting matrix metalloproteinases
- ▶ Nitrate NOT recommended as may cause steal

Treatment of Coronary Artery Ectasia

- ▶ Medical therapy

- ▶ Anticoagulation (no RCT trial)
- ▶ Anti-platelet
- ▶ Cover stent > BMS
- ▶ DES / peripheral stent
- ▶ Tailor made according to underlying etiology

- ▶ Surgical therapy

- ▶ CABG

Pok Oi Hospital

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POH Cardiac Team

- ▶ Dr. Lam Cheuk Sum (COS / Team head)
- ▶ Dr. Chan Yu Ho
- ▶ Dr. Wong Chi Wing
- ▶ Dr. Cheng Yue Hong