

A challenging case of PCI to a native CA through SVG supplying the whole left system

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A Guide for a Hairpin Turn

Patient Demographics

Age: 53
Gender: Female

Risk Factors

Hypertension
Dyslipidemia
Family History of CAD

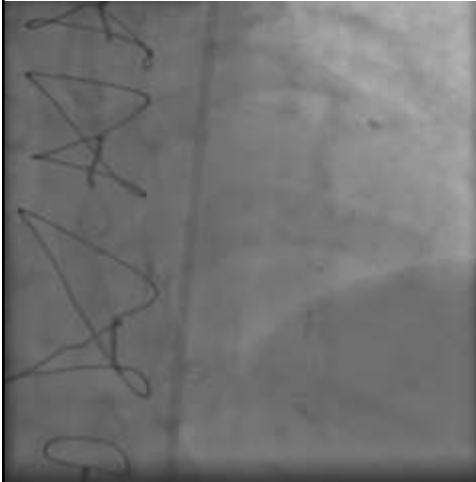
Past Medical History

Severe CAD
CABG X 2, Jan., 2015 :
SVG → OM2
Radial from SVG (**Y graft**) → LAD
PCI and stent (DES 2.5/24) to the graft
insertion site and LAD few months after
CABG

Clinical Presentation

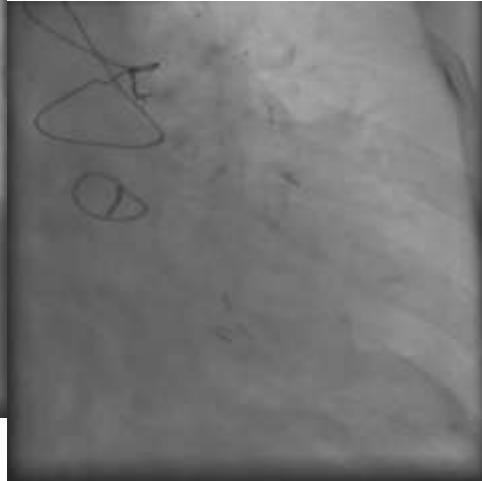
2016 CCVS Class III Angina
Echo: Normal LVEF 58 %
Right dominant and normal; totally occluded LM at the ostium
Patent Y grafts to LAD and OM but with severe LAD ISR
90 % mid OM stenosis shortly before SVG insertion, POBA was
done to LAD ISR and **Failed PCI attempt to OM at another facility**

Diagnostic Angio



Severe LAD ISR

Tandem lesions at the OM graft insertion site and OM (Hairpin turn)



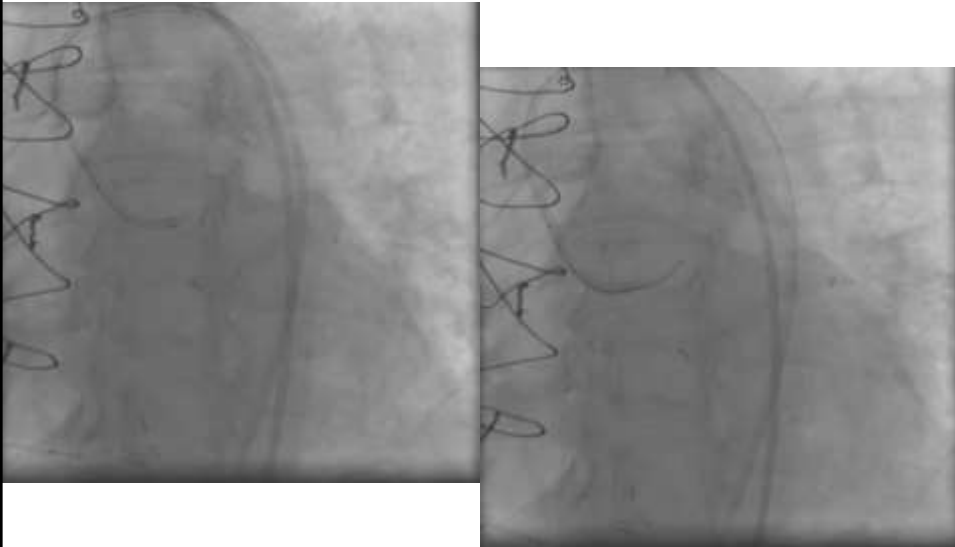
POBA LAD ISR with larger balloons



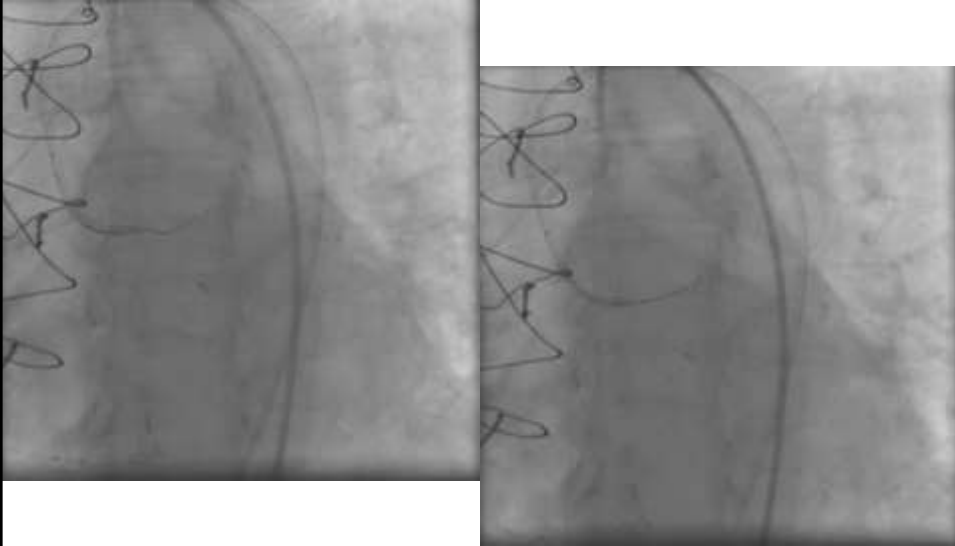
Failed trial of crossing OM lesions through the graft



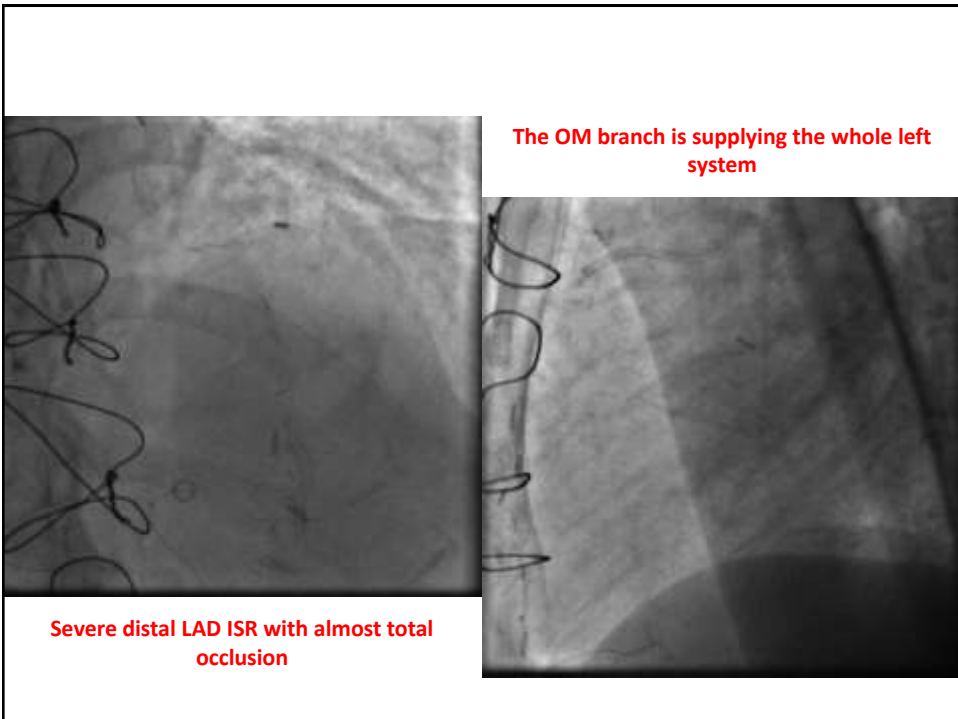
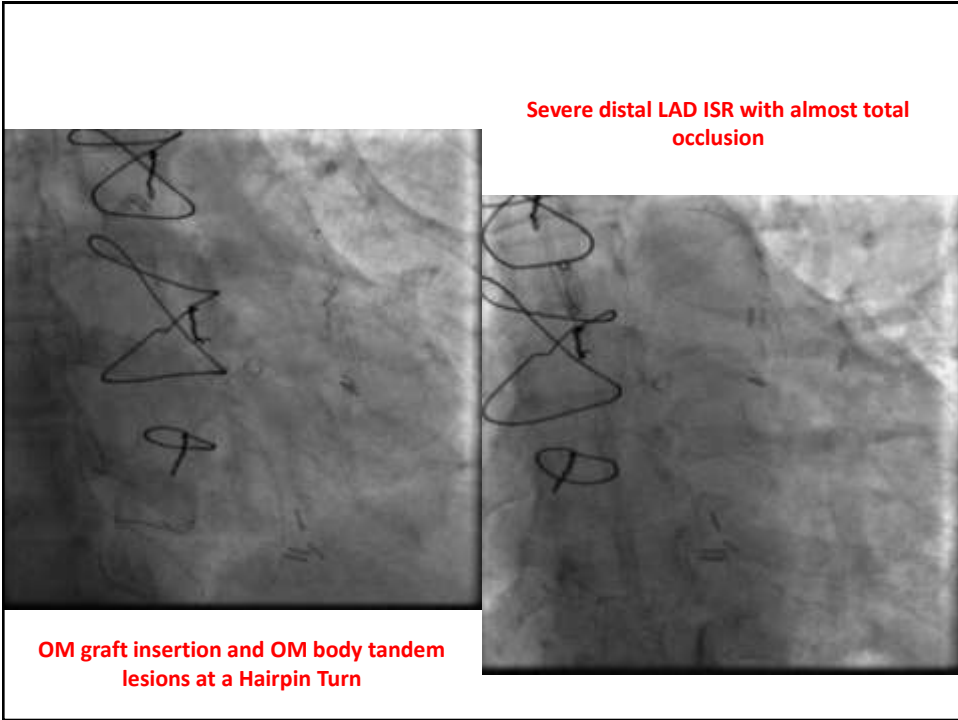
Failed multiple trials to open the LM antegradely



Failed multiple trials to open the LM antegradely



Diagnostic CA



Questions

First question, what will be your strategy

1. To open LM total occlusion, if yes
 - ✓ Antegradely
 - ✓ Retrogradely
2. Treat graft-OM tandem lesions at this hairpin turn

Second question, what should you do if

1. Wire failed to cross
2. Balloon failed to cross
3. Device (stent) failed to cross

Avoiding and Overcoming the 'Uncrossable' LESIONS

1. Guide catheter Support

- 35 cm arterial sheaths
- 8 Fr guides: AL1, XB, Deep engagement
- Re-crossing with second guidewire
 - a) *Buddy wire technique (Parrellel wire, Sidewire)*
 - b) *Anchor Balloon*

2. Mother-Child dual coaxial guide support

3. Tornus device

Ablative techniques

1. Rotational Atherectomy
2. Excimer Laser Ablative acoustic energy
 - Excimer laser or high-speed rotational atherectomy may allow balloon passage or expansion of otherwise nondilatable CTOs.

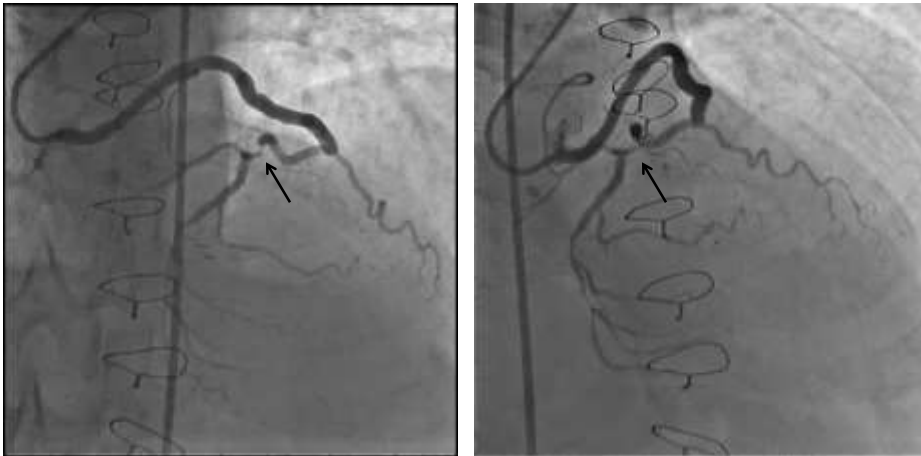
Strategies to Improve Inadequate Guide Catheter Support

John S Douglas Jr MD
S Tanveer Rab MD

Sunday December 8 , 2013 9:30AM

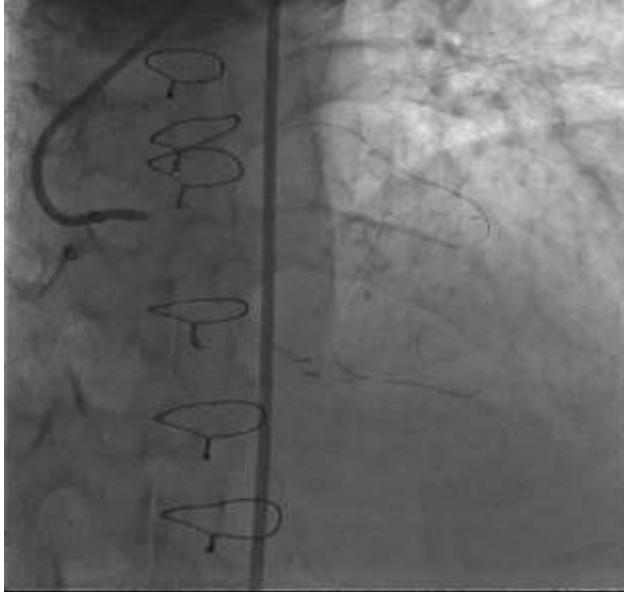
Emory University School of Medicine
Atlanta Georgia

Saphenous Vein Graft to OM2



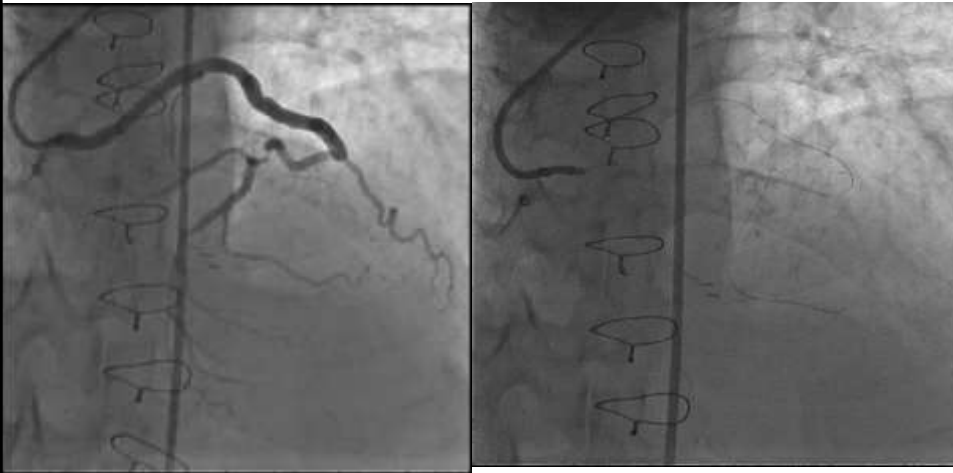
High grade stenosis beyond saphenous vein bypass graft insertion
producing dominant circumflex ischemia

0.014" Hydrophilic Extra Support Guidewire

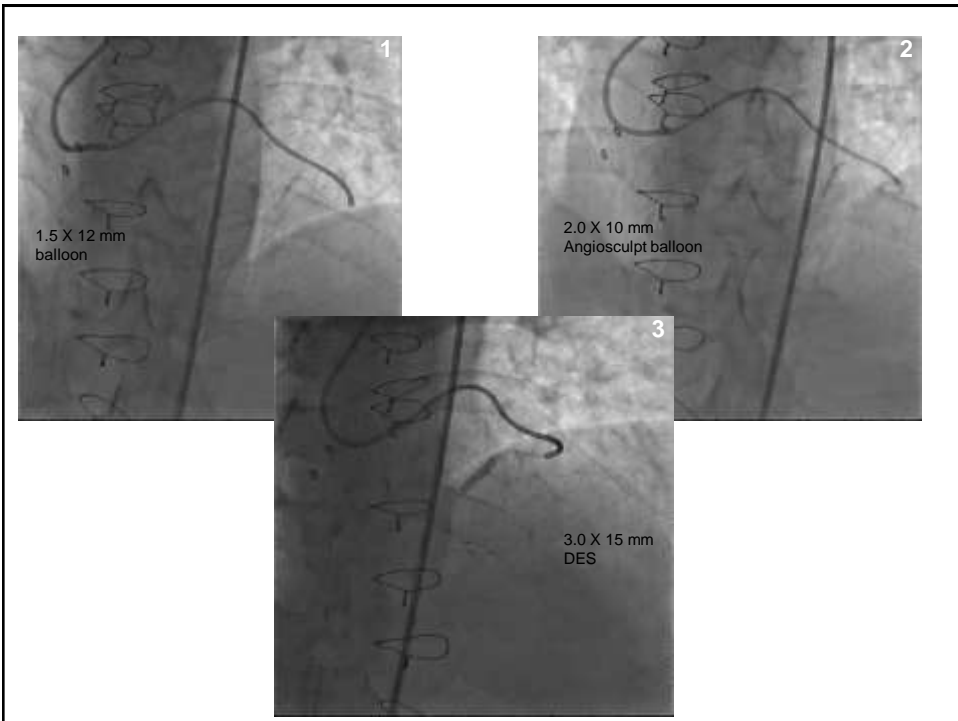
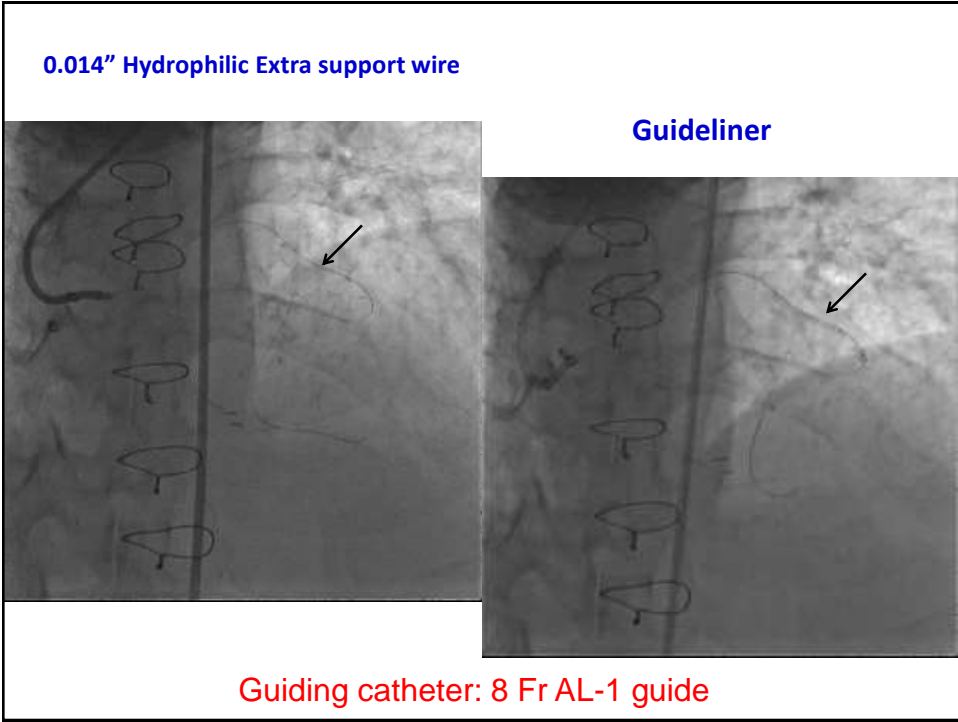


Guiding catheter: 8 Fr AL-1 guide

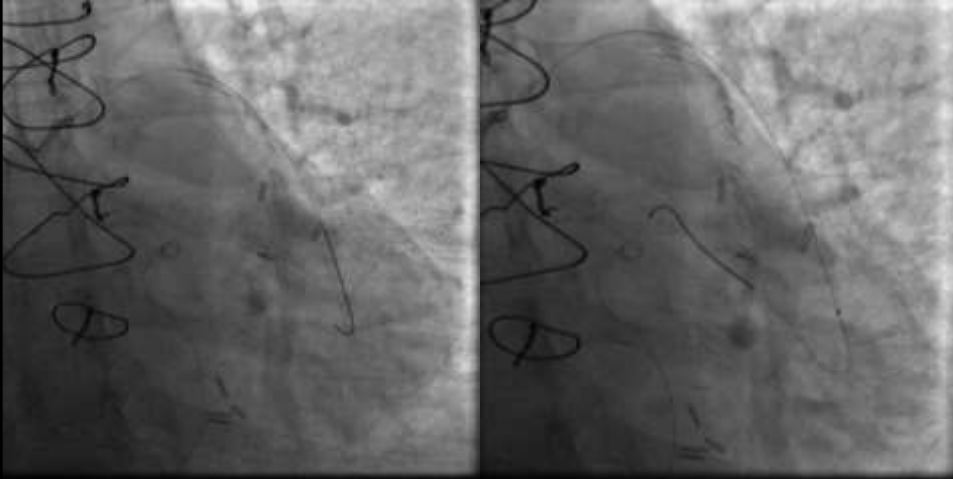
Unable to Cross Lesion With Balloon



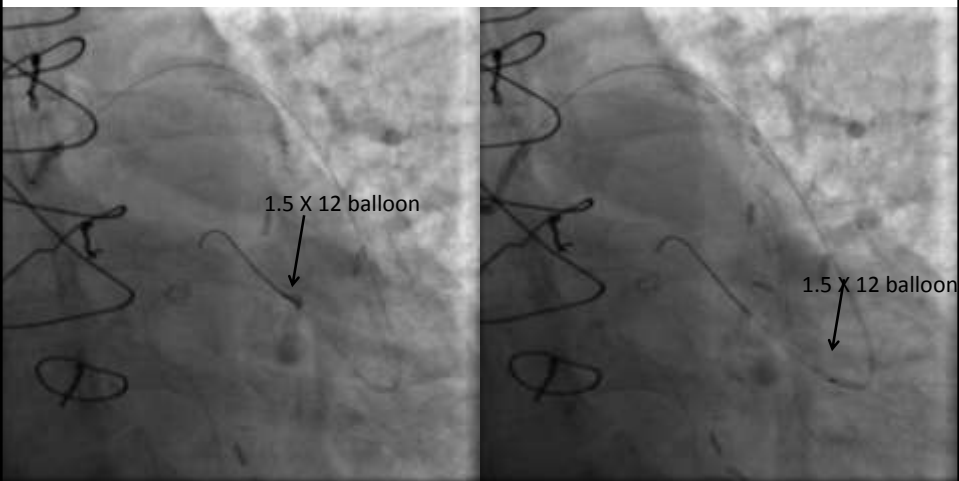
Guiding catheter: 8 Fr AL-1 guide



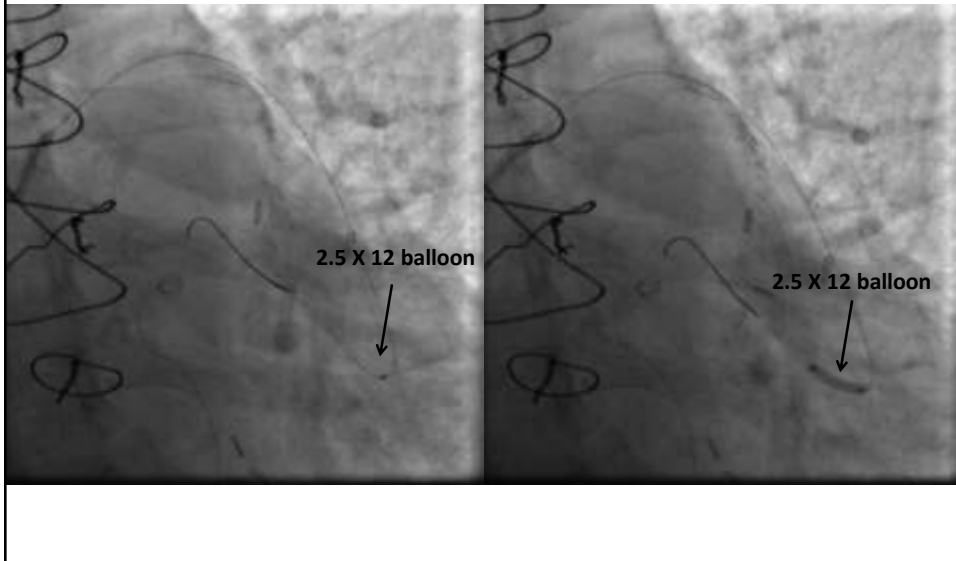
**TRA, Amplatz right guiding catheter
Runthrough moderate support wire**



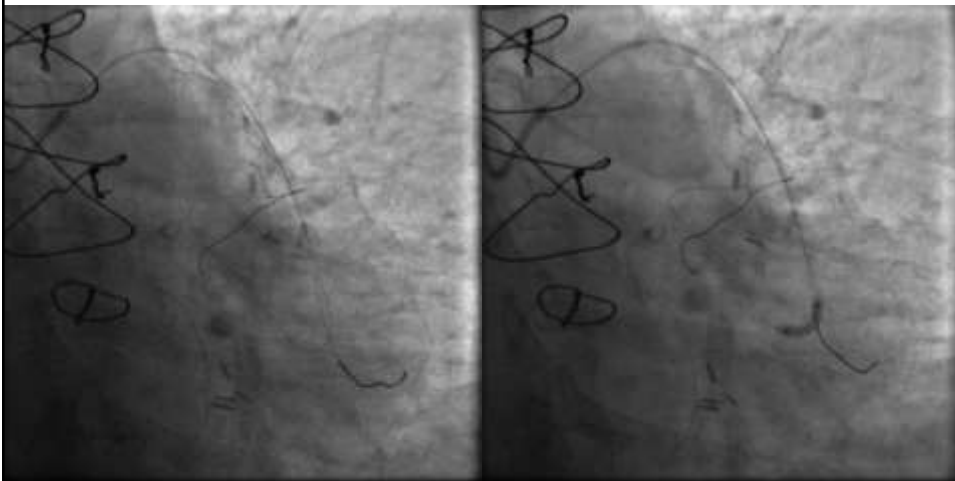
**First trial to open the LM retrogradely but the whole system
was about to disengage the SVG so started balloon dilatation of
the tandem lesions**



Dilatation with larger balloon



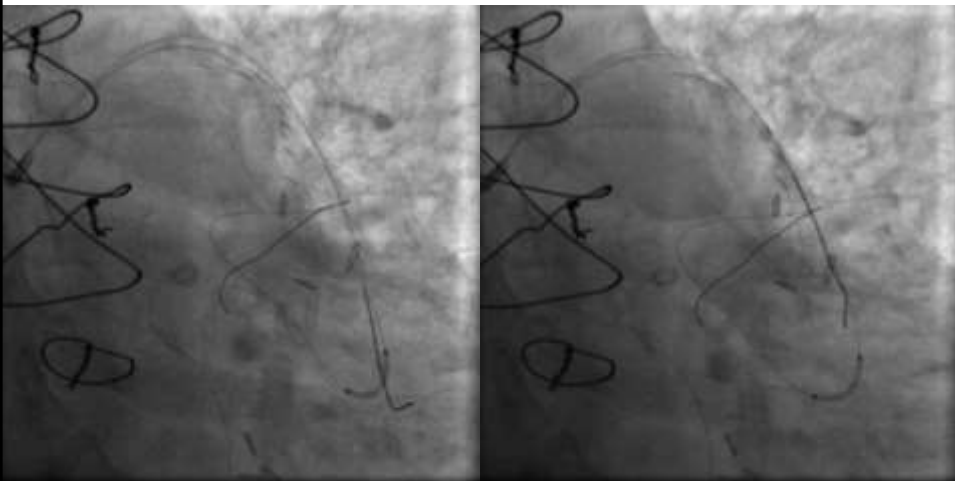
Failed to pass the stent with disengagement of the whole system, the **Runthrough** wire failed to pass lesions so left in the distal OM to protect it and another **Pilot 50** wire successfully crossed the lesions to proximal OM-LCx-LAD-large septal branch for support



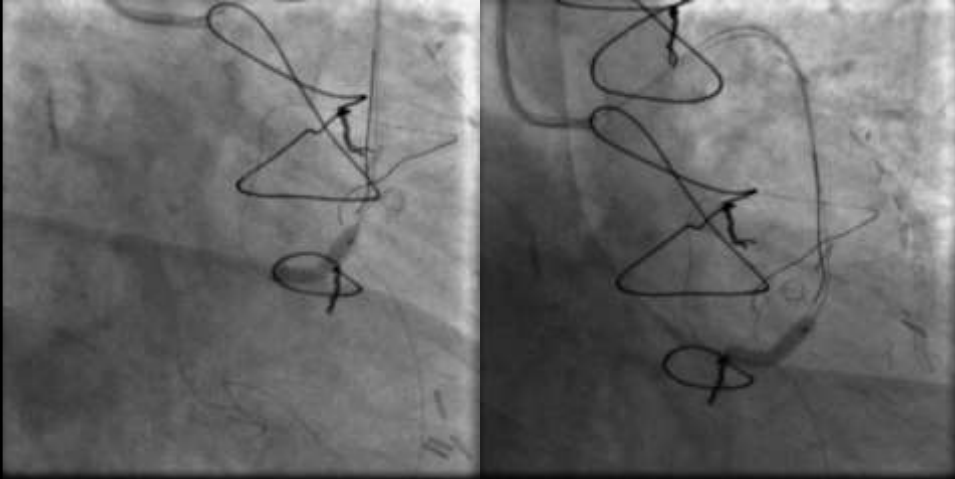
Re-dilatation at higher pressure



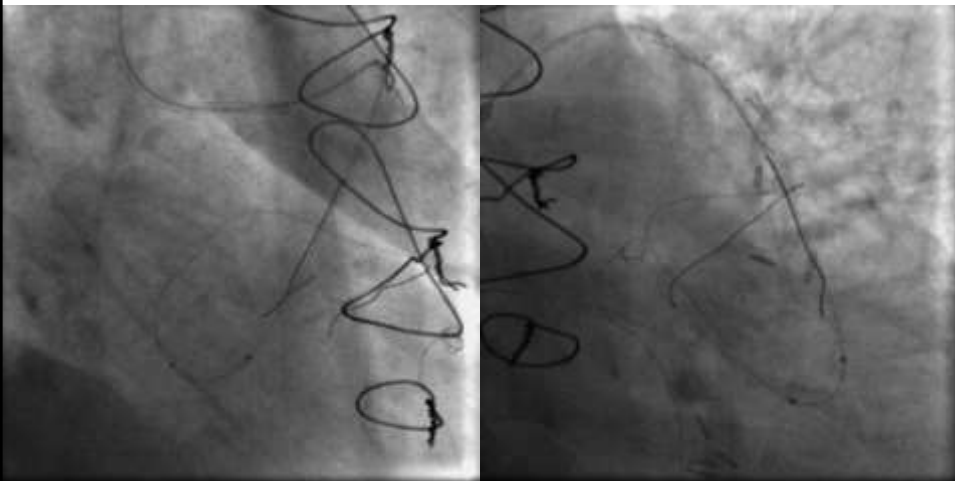
Stent positioning and deployment



Stent deployment



Final result



Final result



Take Home Message

- Complex challenging lesions are attempted in an increasing number of patients. New solutions, beyond passive and active GC support, are needed to improve success.
- Final success can be achieved only when the operator is familiar with the specific device and technique used, which stresses the need for continuous training in a rapidly changing field such as interventional cardiology.

Patience Patience Patience

