# There’s more than one way to crack an egg!

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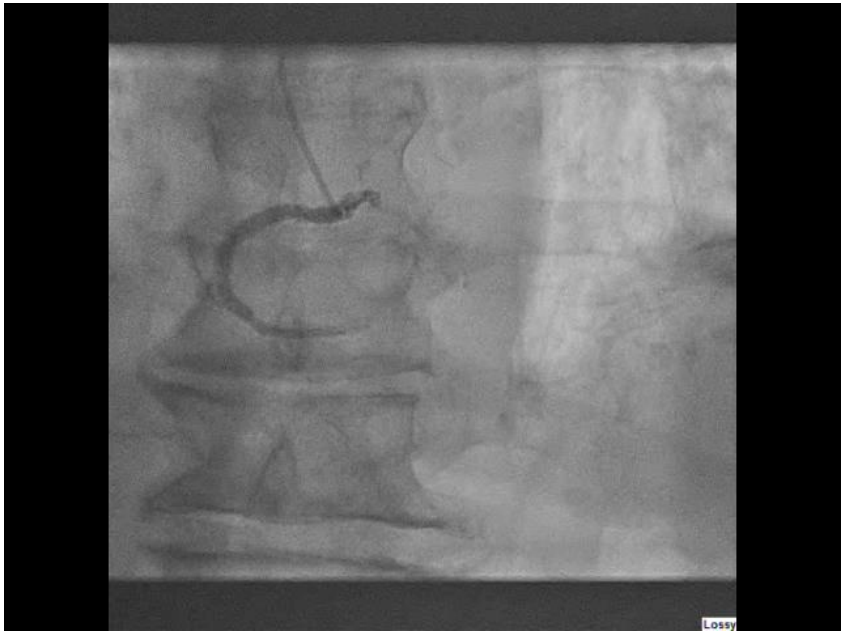
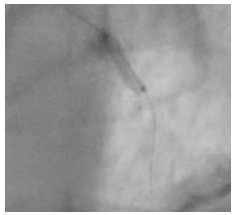
# Case 1

- 75 years – old- man, presented with NSTEMI (Serial Troponin I : 82 and 201 ng/L)
- ECG – Sinus, no ischemic changes
- Past medical history – Hypertension
- Invasive coronary Angiogram  revealed (Left radial access) -

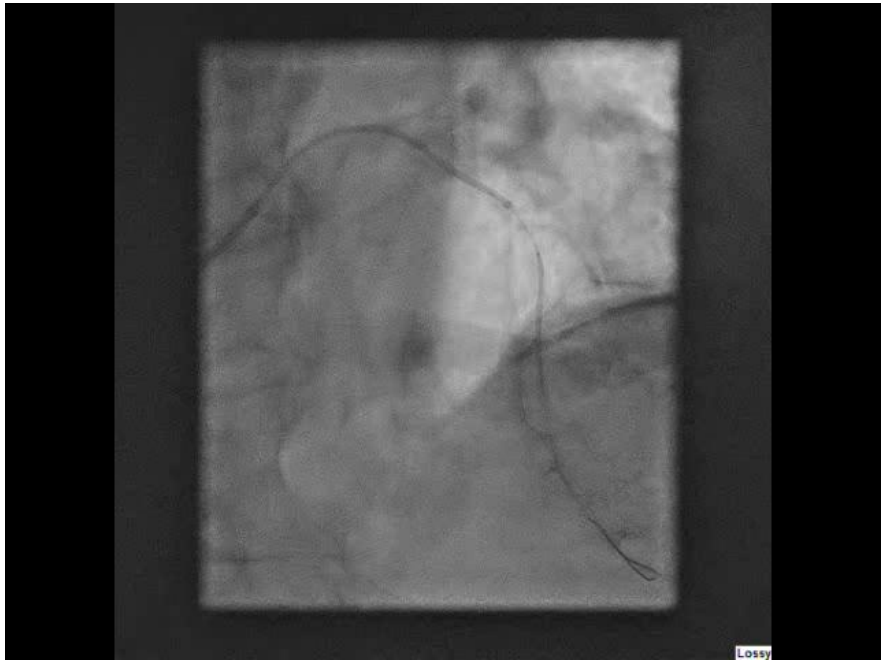
# Stenting using Guide extension

Extra Back up guide 3.75, 6Fr., work horse guide wire

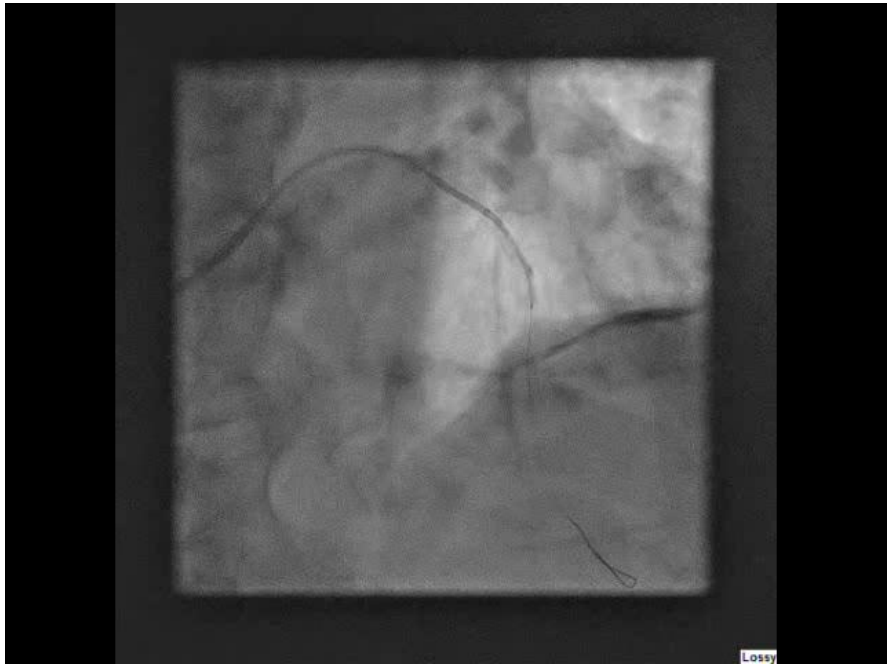


Pre-dilatation

2.5x24 mm DES – distal stenting



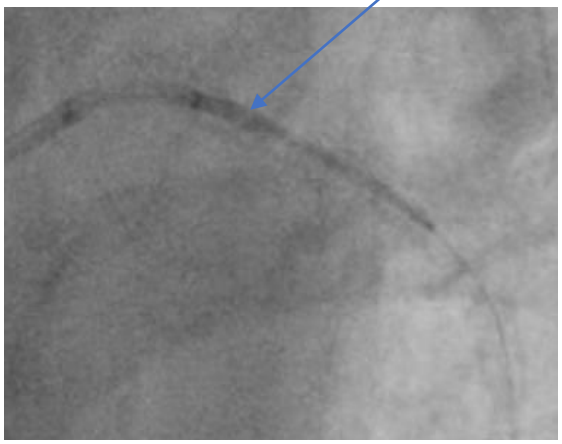
**Distal stent deployment using Guide extension**

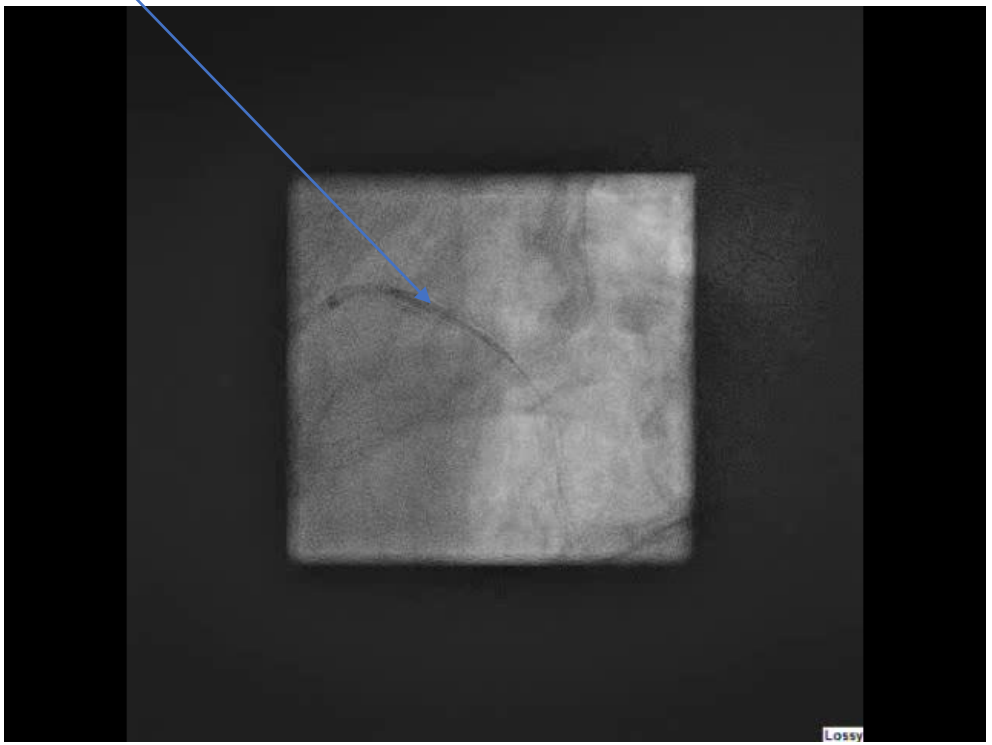


**Difficulty in Proximal stent positioning**

# Case 1

- **Proximal stenting (3.5x38mm) attempted with guide extension catheter**
- **Unable to pass stent, retrieved into guide extension resulted in Proximal stent struts crimped- partial stent loss**

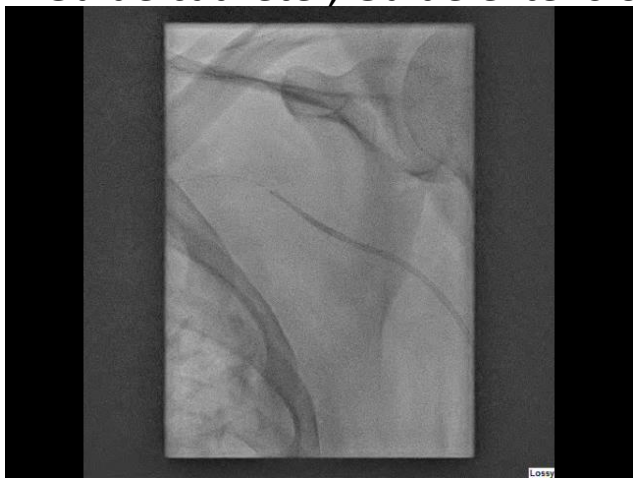





Secured the wire position in the LAD via Right Femoral access, 2nd guide catheter / work horse wire

# Retrieval of whole assembly

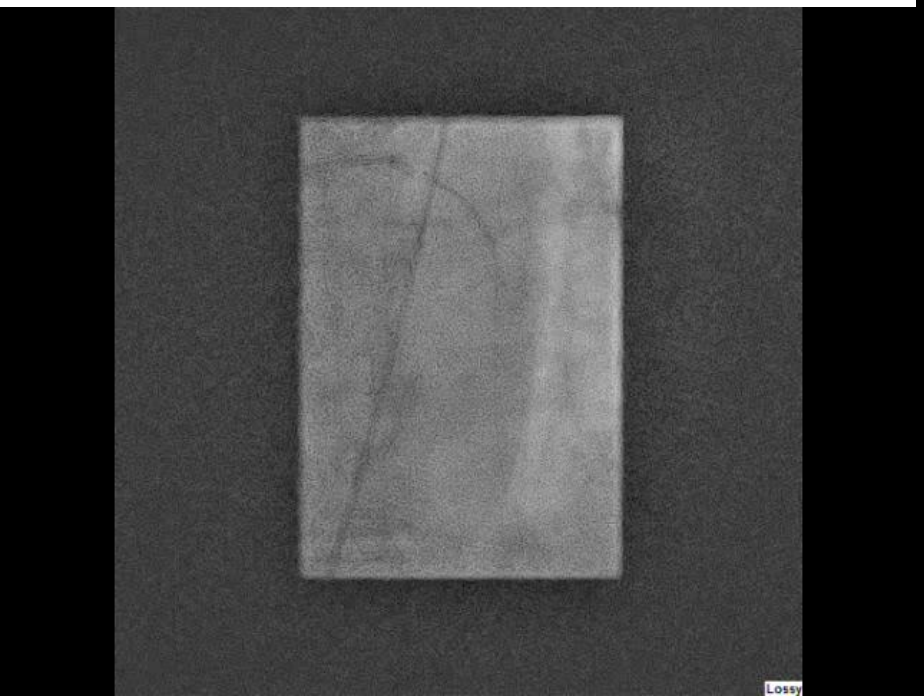
Enbloc retrieval of whole assembly;
Guide catheter, Guide extension, wire, stent



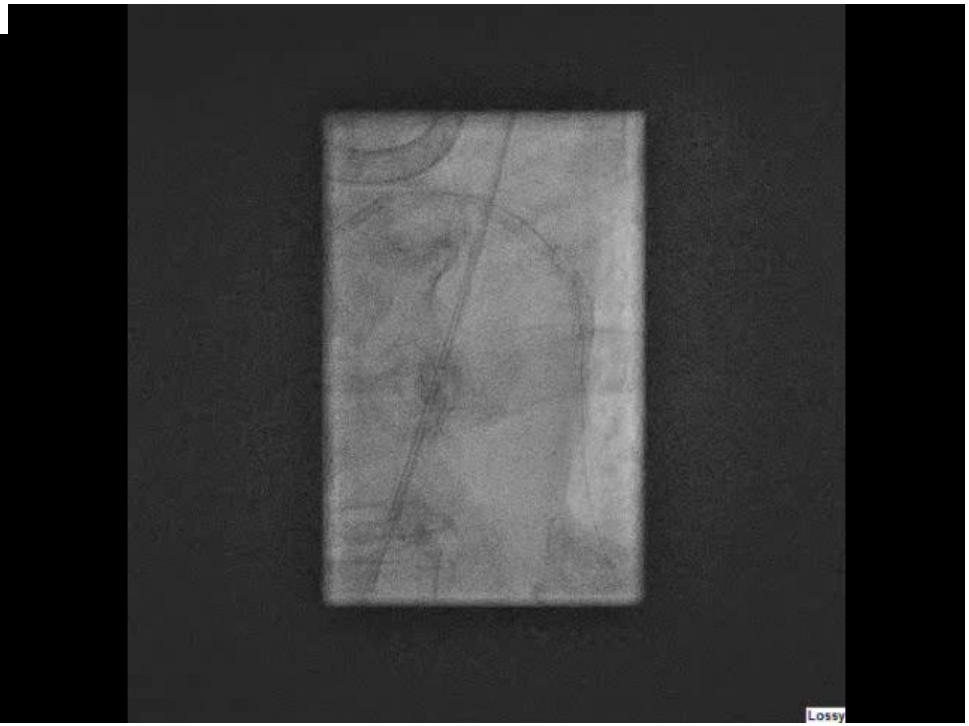
Parked the stent in the wrist undeployed

# Conventional PCI to LAD & final result

PCI to LAD via RFA



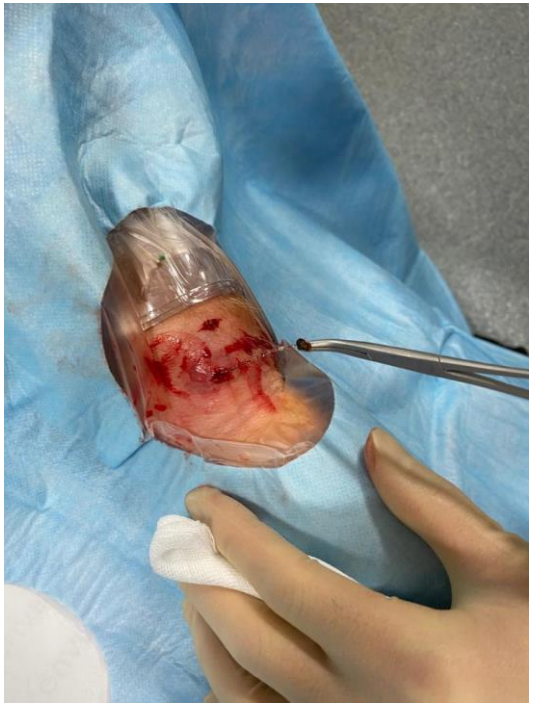
Final result



Helix Hemostasis achieved, remained hemodynamically stable- discharged

# Case 1

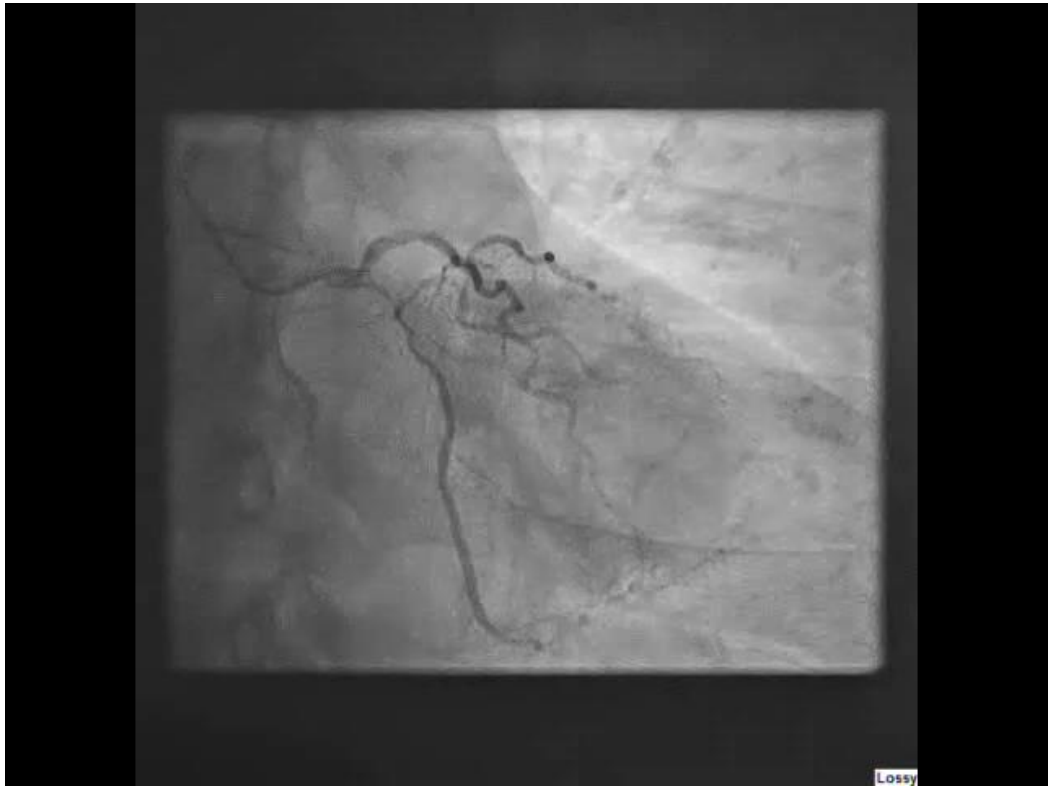
- Revisited after 3 weeks with external protrusion of stent struts from left radial access site
- Pulse present, access site skin erythematous, no bleeding or tenderness. Struts visible.
- Following vascular surgical advice, stent pulled out under local anaesthesia



- On follow-up in 6 weeks pulse palpable, no metal remnants at the site on wrist x-ray

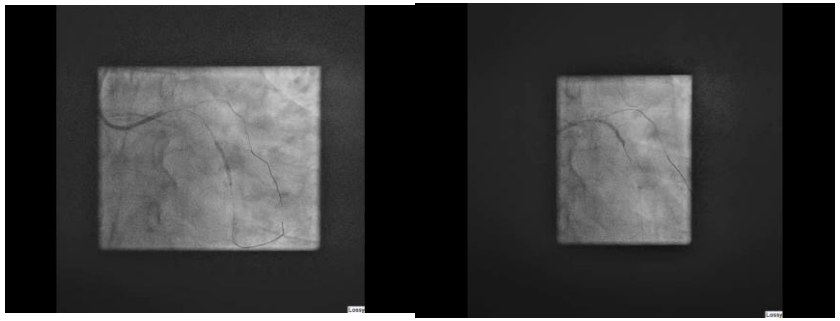
# Case 2

- A 54-years-old-lady presented with unstable angina, Troponin – Negative
- ECG- Anterolateral Ischaemic changes
- PMH – Hypertension, Hypercholesterolemia
- Diagnostic Coronary Angiogram – Severely calcified LAD and LCx, with severe proximal-mid LCx Stenosis

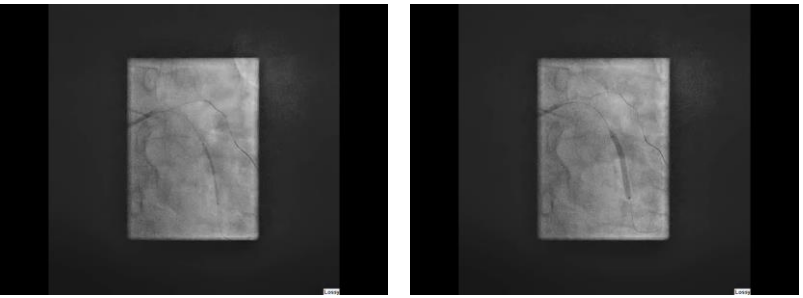



# Case 2

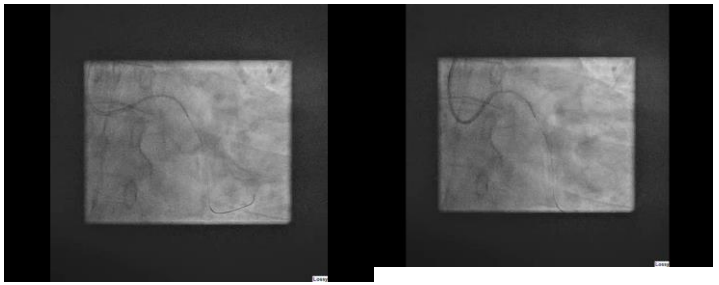
- EBU 3.5 Guide, Work horse wire both arteries – LAD/LCx
- Pre-dilatation **2.5X15mm** Compliant balloon



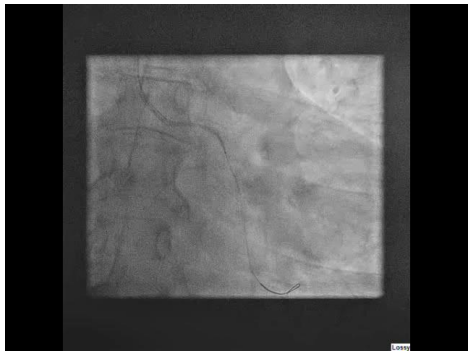
- Mid LCx 2.75X24mm DES Deployed

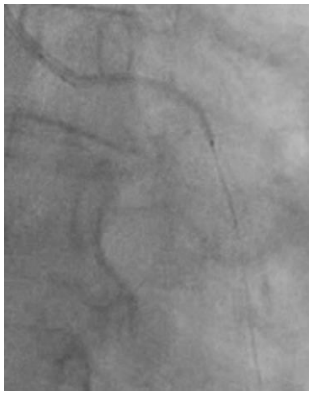


- 2nd Stent (**3X33mm DES**) would not track down beyond the LMS-LCx bend despite multiple attempts

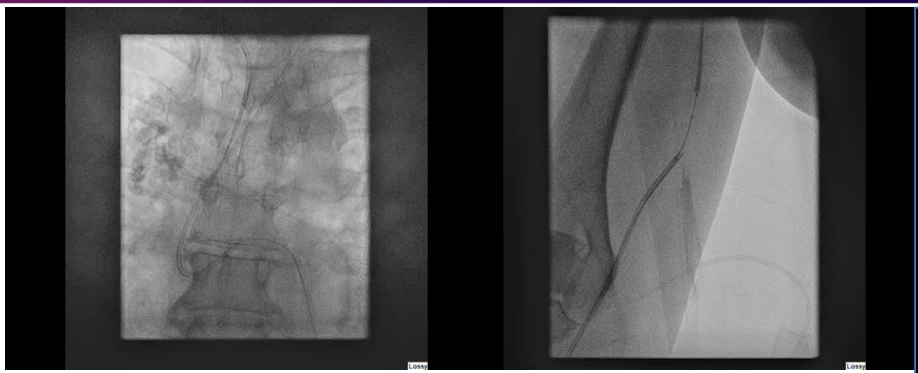


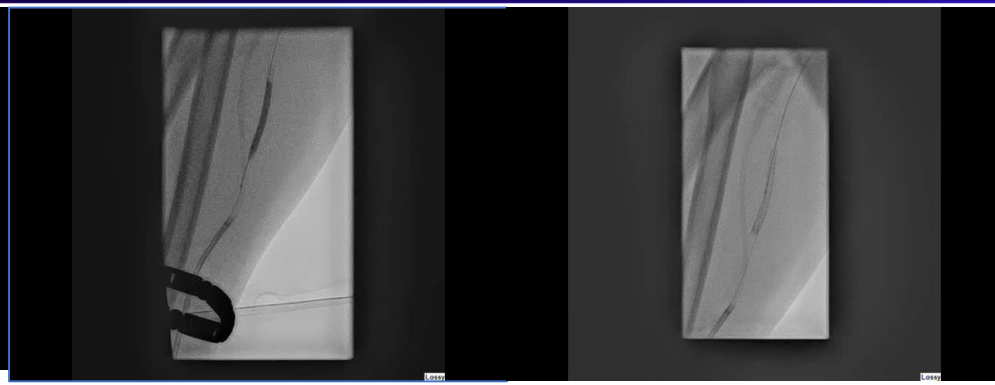
- Proximal stent crimped – partial stent loss still attached to the balloon



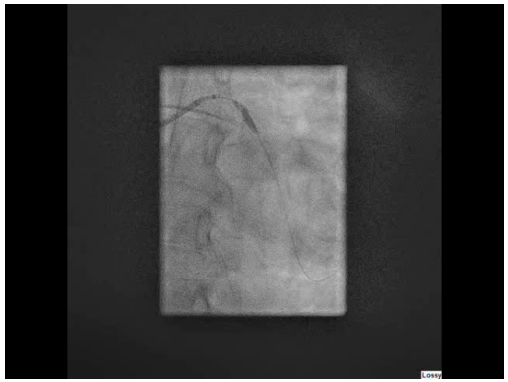


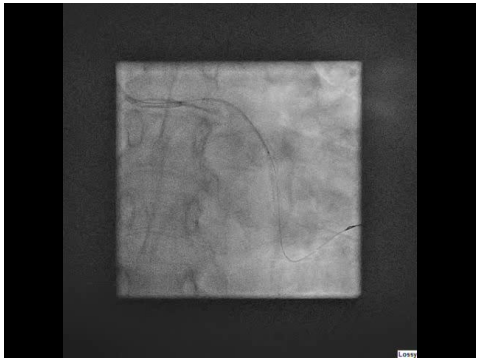
# Case 2

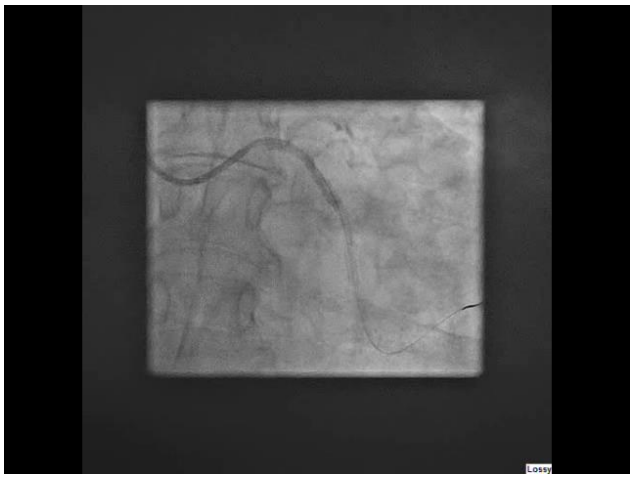




- Second access via RFA, secured wire position in the LCx after wiring
- Enbloc retrieval and deployment of the stent in the forearm –Radial artery with progressive balloon dilatation
- Angiographically confirmed Radial artery stent expansion



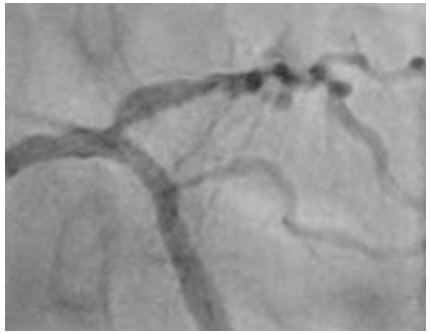




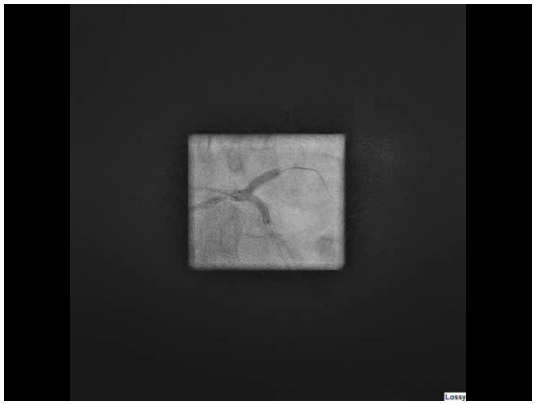
- Using Guide extension further NC balloon pre-dilatation and stenting done

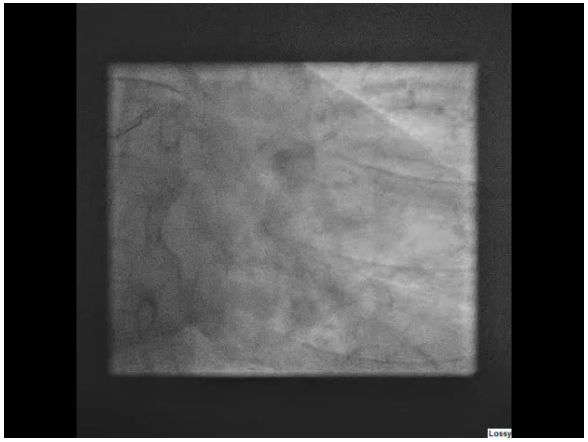
# Case 2

Ostial LAD plaque shift and pinched



LAD Re-crossed, T-stented (3.5x28mm DES) / Simultaneous Kissing inflation





- Mid LAD – long segment of disease has been left alone
- Rt. Forearm - no vascular complications
- Reviewed in clinic on follow-up and remains asymptomatic and well
- Secondary prevention medications continued

# Conclusion

- Severely Calcified, tortuous coronary arteries with significant stenosis are difficult subset for PCI
- After pre-dilatation Intracoronary imaging would have helped to assess the optimal lesion preparation
- Inadequate lesion preparation, tortuosity with calcium lead to resistance to antegrade stent tracking
- Bail out strategy of second access, securing 2$^{nd}$ wire position in already predilated artery is an important step
- 1$^{st}$ case - Pushing forward against resistance possibly damaged stent which resulted in partial stent loss while retrieving into guide extension in first case
- 2$^{nd}$ Case – Lack of co-axiality of the guide catheter whilst retrieving the stent damaged the proximal stent struts and crumpled it in second case
- Retrieving the whole assembly and parking the stent undeployed or deploying the stent in a peripheral artery is not ideal but acceptable and relatively safer option than deploying the damaged stent in LMS leading to high risk of Stent thrombosis
- Duty of candour observed at the end – explained to the patient in both cases

# Lessons learnt

- Adequate lesion preparation – very important particularly in calcified vessels
- Diagnostic pre - PCI Intra-coronary imaging guidance would help
- Partial stent loss and stent migration are not uncommon,  can happen with new generation thin strut stents
- Do not push against resistance and maintain co-axiality of the guide catheter whilst moving the stents in and out of the guide
- One should be aware of the bail out strategies and deploying the deformed stent in radial artery peripherally is less of a harm than in coronaries
- Duty of candour should be observed at the end