



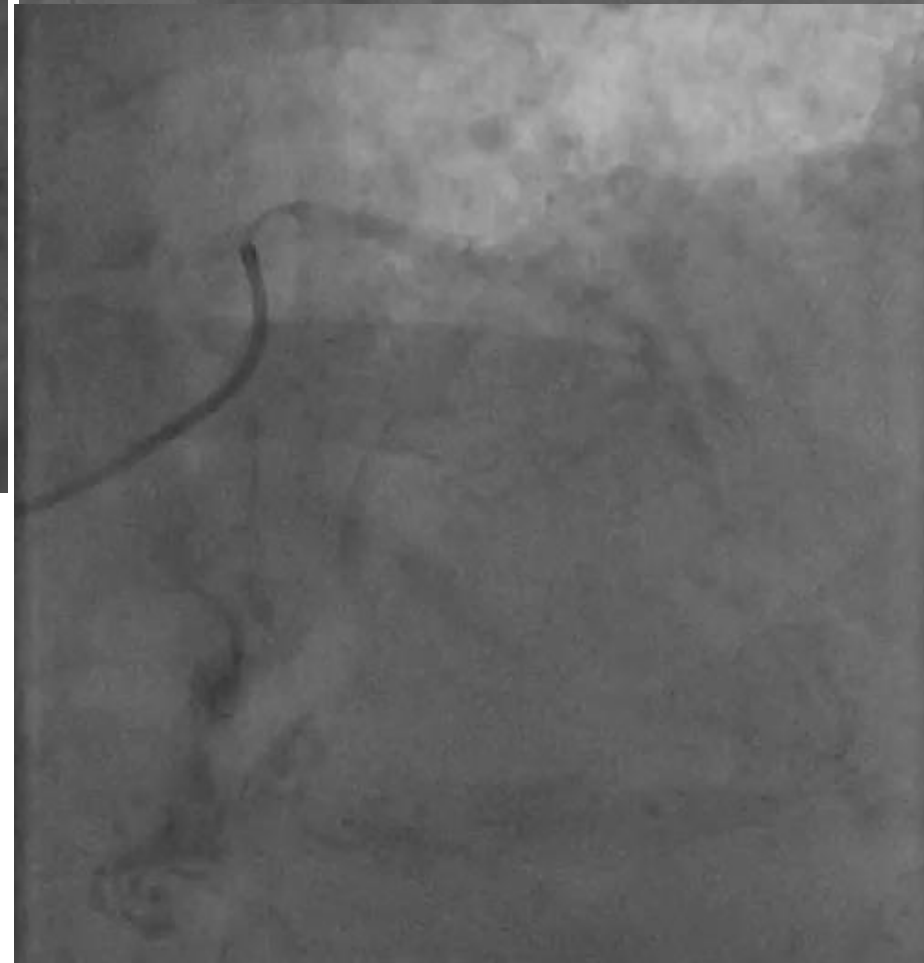
Pump, Prepare, Fracture and Deliver: A Contemporary Approach

Time to Change Our Interventional Therapeutic Approach

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No Conflicts of Interest

- 90 Male, Multiple co-morbidities
- Recurrent TIAs, recent a week ago, awaiting endarterectomy
- Peripheral vascular disease with left SFA angioplasty
- Admitted with NSTEMI. Troponin rise to 2000ng/l (0-34)
- ECG : Global ST depression with mild ST elevation in aVR
- Mild left ventricular systolic dysfunction on echocardiogram



- Discussed in Heart team meeting
- Surgical turndown
- Ongoing symptoms and considered for urgent PCI to LMS/LAD

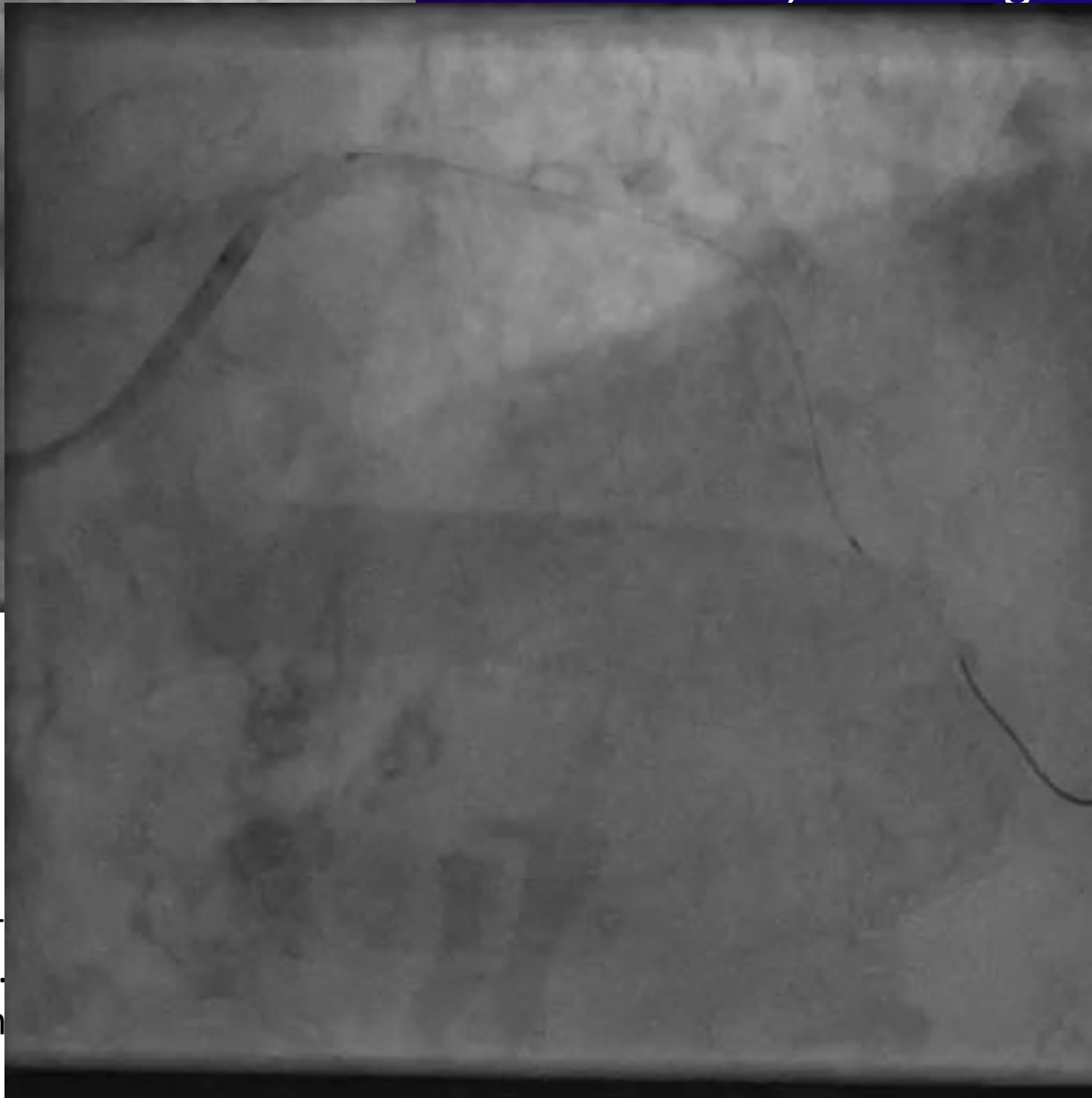
Complex High risk indicated PCI (CHIP) approach:

- Access?
- Mechanical circulatory support ?
- Devices for calcium breakdown ?
- Imaging?
- Bail out options?
- Complications management?

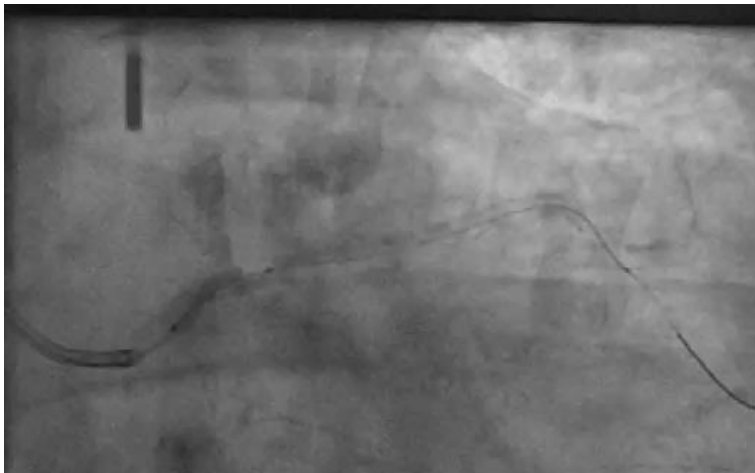
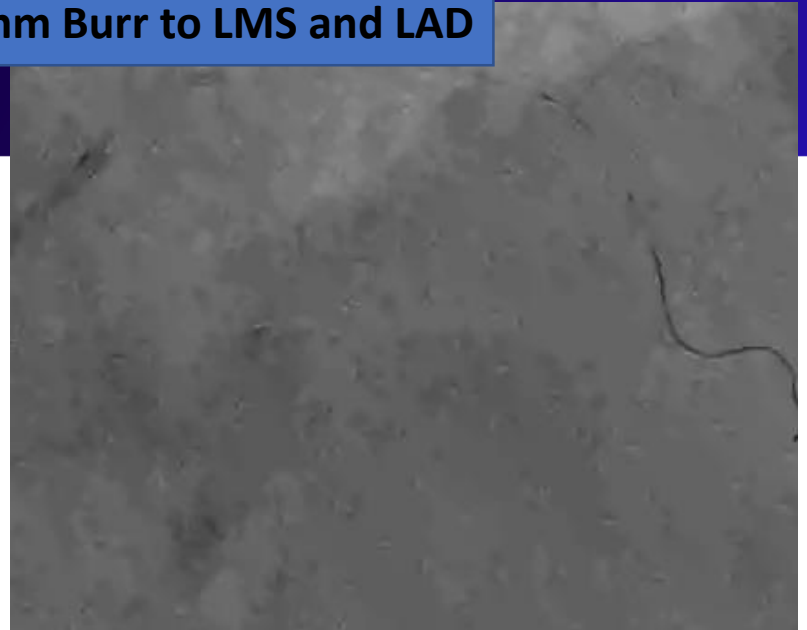
6F RRA, EBU3.5 guide catheter
A IABP 1:1

Upfront IABP

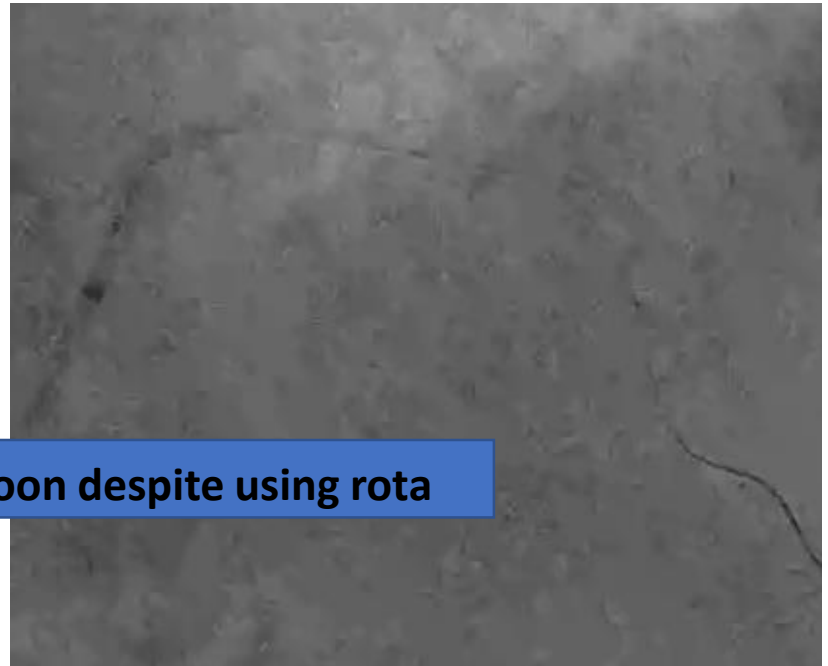
Aggressive pre-
with 2.0, 2.5, 3.
Poor expansion



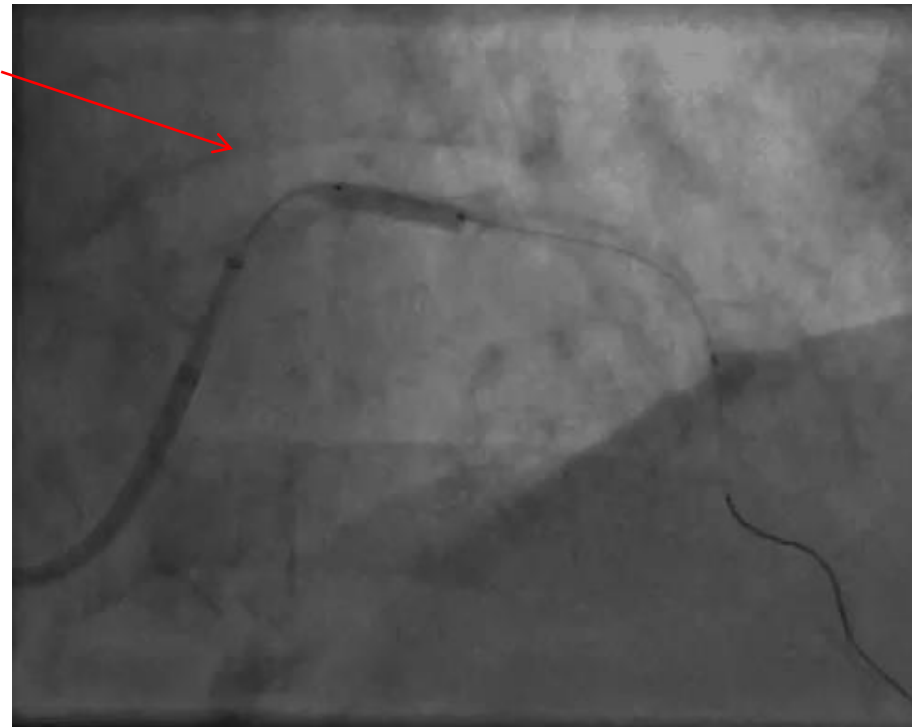
Rotational atherectomy with 1.5mm Burr to LMS and LAD



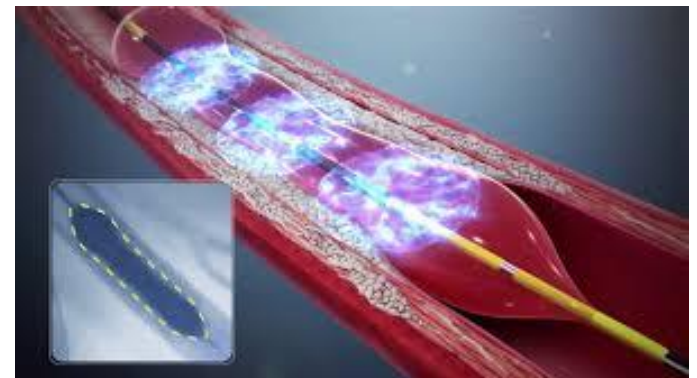
Under-expanded NC balloon despite using rota



Well expanded
now



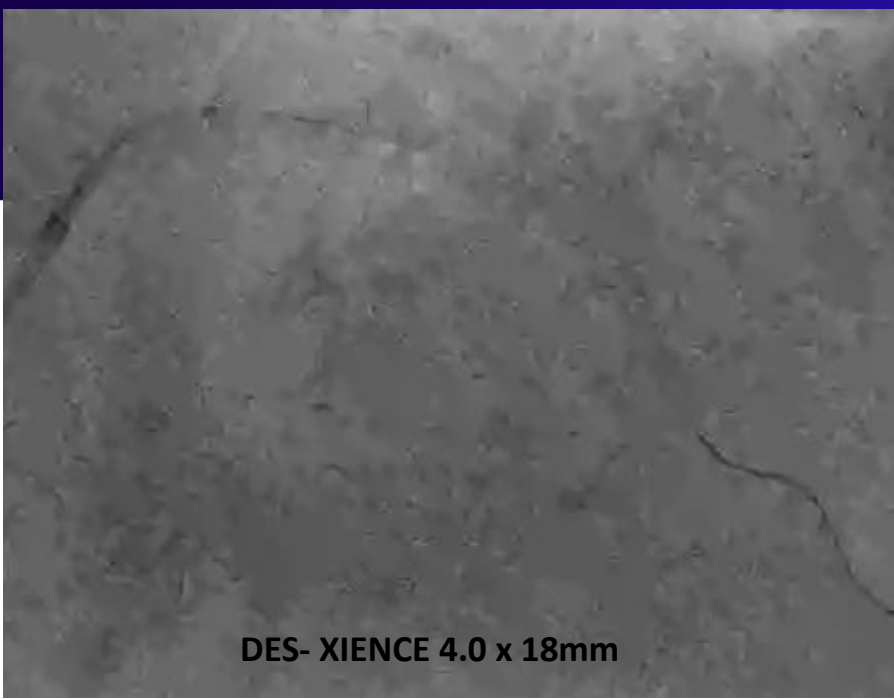
Shockwave 3.5 x 12mm balloon
6 x 10 bursts given in total to LMS and LAD





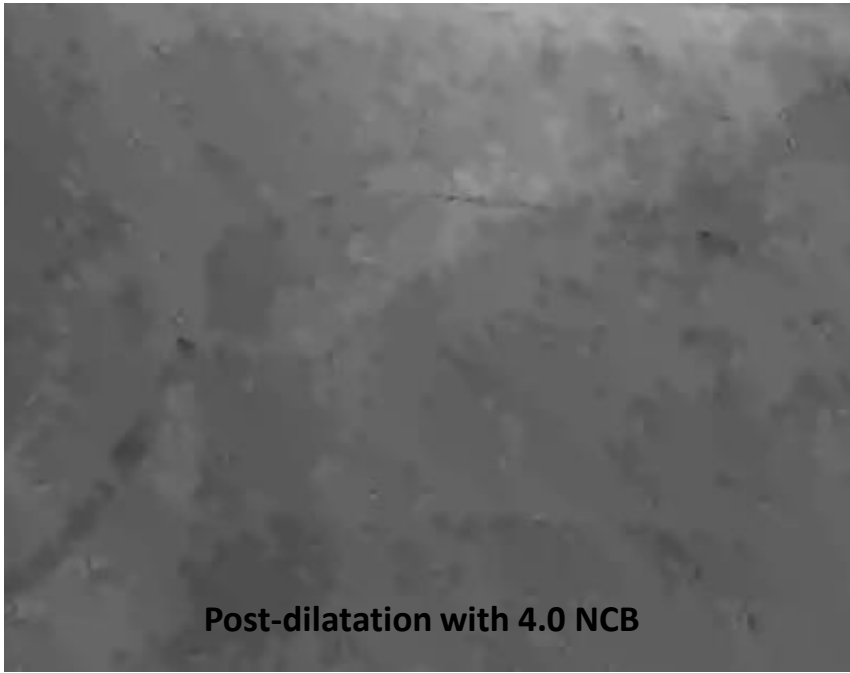
Overlapping DES- XIENCE 3.0 x 18 and 3.5 x 23mm

This angiogram shows two overlapping drug-eluting stents (DES- XIENCE) in a coronary artery. The stents are positioned to treat a lesion, with the 3.0 x 18mm stent overlapping the 3.5 x 23mm stent.



DES- XIENCE 4.0 x 18mm

This angiogram shows a single DES- XIENCE 4.0 x 18mm stent deployed in a coronary artery, covering the target lesion.



Post-dilatation with 4.0 NCB

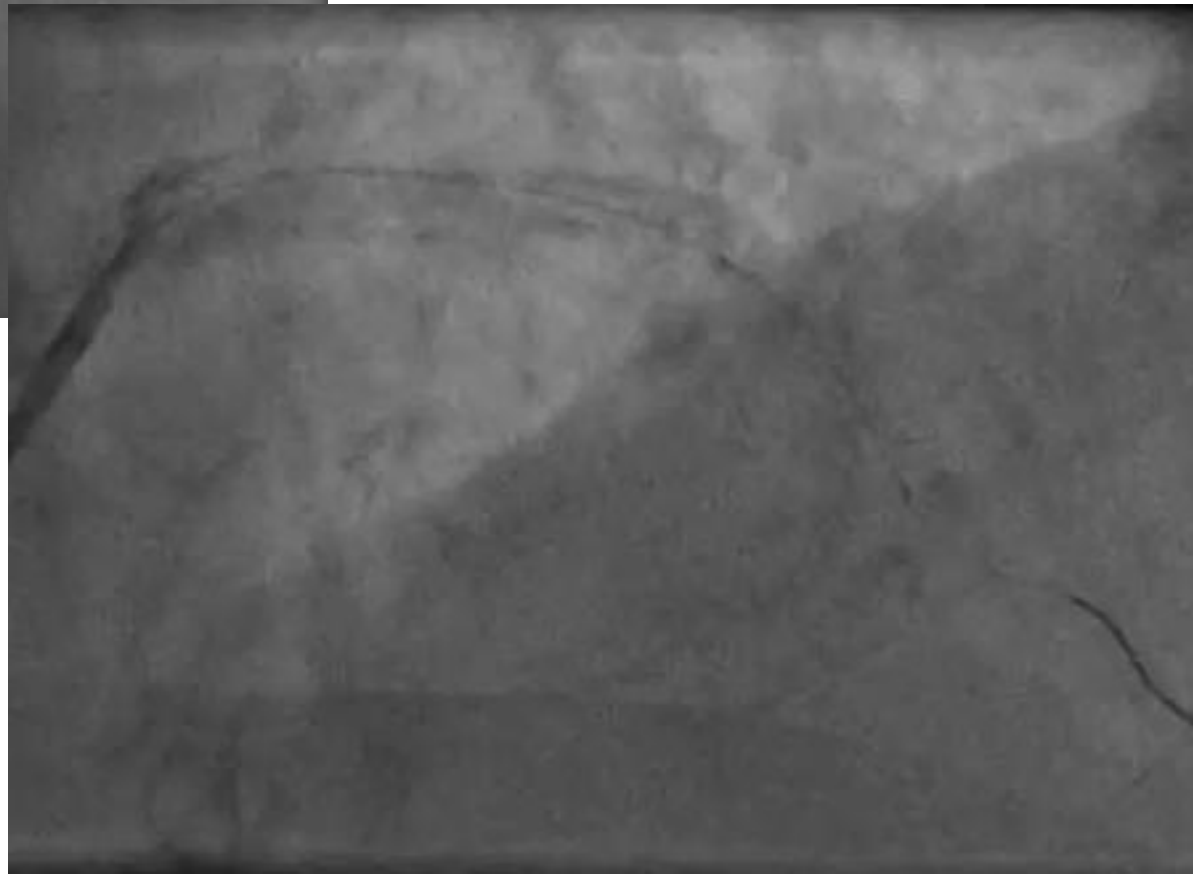
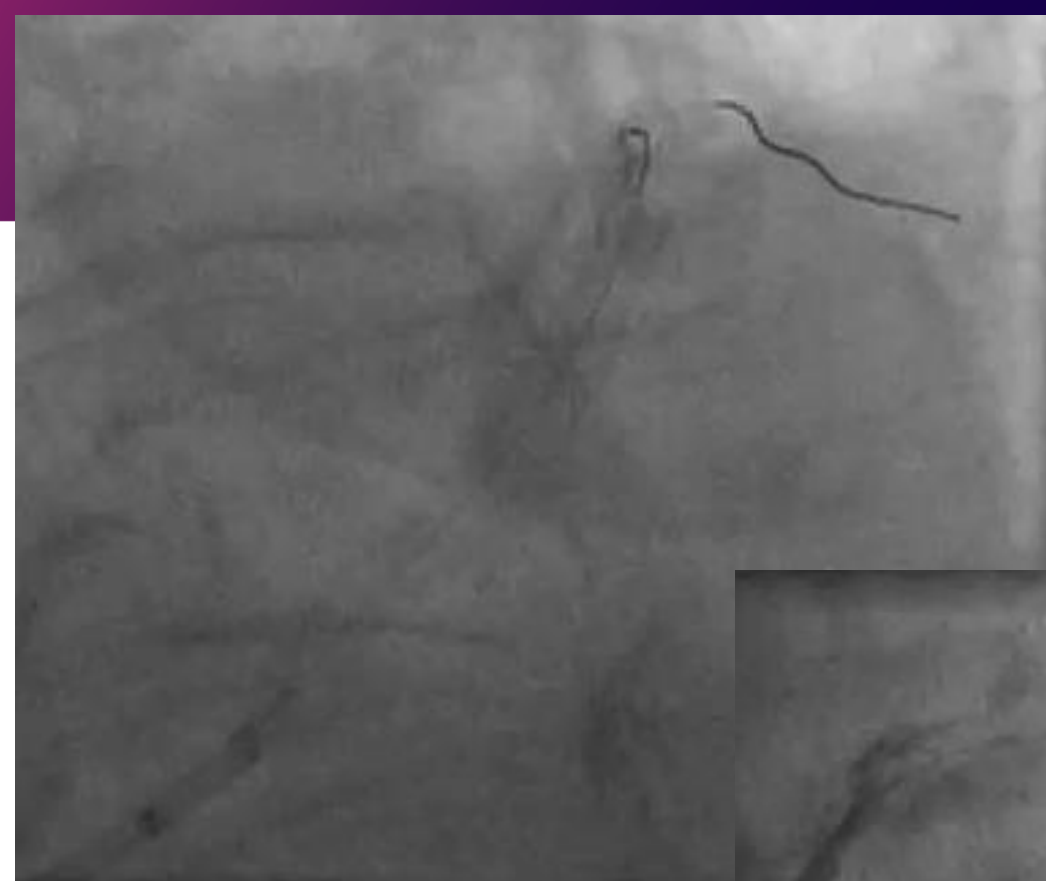
This angiogram shows the result of post-dilatation using a 4.0mm non-compliant balloon (NCB). The stent is well-dilated, and the lesion is covered.



Post-dilatation with 4.5 NCB

This angiogram shows the result of post-dilatation using a 4.5mm non-compliant balloon (NCB). The stent is well-dilated, and the lesion is covered.

Final picture



Conclusion: ROTA-SHOCK-PUMP Approach

- Severe calcified lesions in CHIP cases can be safely treated with latest contemporary approach: **Rota-Shock-Pump**
- Upfront mechanical support in CHIP cases, as associated with a high risk of hemodynamic compromise.
- High risk of perforation, therefore Shockwave Lithoplasty balloon seems to be a transformational technology, as requires a low inflation pressure and minimal risk of coronary perforation.
- Because of the profile of the current Shockwave balloon, it would not cross those tight calcified lesions before rotablation and hence “Rota-shock” may become a very attractive approach in such scenario.
- Very satisfactory balloon expansion achieved after Shockwave lithotripsy followed by excellent stenting result.
- Time to Change Our Interventional Therapeutic Approach.