

1053 Carve your way! Orbital atherectomy with mechanical circulatory support in severely calcified lesion

Case presentation:

<BR>A 63-year-old gentleman, smoker, with history of poorly controlled diabetes mellitus (with HbA1c up to 14%), hypertension, hyperlipidaemia and poor lifestyle control was admitted to our hospital for chest pain and severe shortness of breath. A diagnosis of acute pulmonary oedema was made, and he was intubated with mechanical ventilatory support. After stabilisation with intravenous diuretics, he was extubated uneventfully. Echocardiogram found poor left ventricular ejection fraction of <35%.

<BR>Subsequent coronary angiogram found severe triple vessel disease including heavily calcified LAD with proximal LAD (#6) 70% stenosis, proximal-to-mid LAD (#7,8) diffuse 70% stenosis; mid LCx (#11) 70% stenosis, distal LCx (#13) 99% stenosis; PL (#16) long diffuse 80% stenosis plus retrograde to LCx.

<BR>Our interventionist has anticipated haemodynamic instability and undilatable calcified lesion and decided to proceed to PCI of the left system (LCx and LAD) with atherectomy device under mechanical circulatory support.

<BR>[Preparation] Mechanical circulatory support by Impella was established.

<BR>[Target Lesion 1] Whole LCx (#11,13)

<BR>[Strategy] Stenting under IVUS guidance. Two DES were used - Xience Sierra 2.0/38 to dLCx #13 and Resolute Onyx 3.5/38 to pLCx #11).

<BR>[Final result 1] Good angiographic result in LCx.

<BR>[Target lesion 2] Whole LAD (#6,7,8)

<BR>[Strategy] Orbital atherectomy with Diamondback 360 followed by stenting. Calcium break was noted in IVUS. Three DES were used - Xience Xpedition 2.5/48 to dLAD #8, Xience Xpedition 3.5/48 to p-mLAD #7 and Xience Sierra 3.5/18 to ostial LAD #6.

<BR>[Final result 2] Good angiographic result in LAD.

<BR>Patient was well after PCI and was discharged uneventfully. His diabetes control also improved in subsequent follow with HbA1c dropped from 14% to 7%. No recurrent chest pain or repeat revascularisation was noted till recent follow up.

<BR>Summary:

<BR>Successful PCI with orbital atherectomy and mechanical circulatory support.