Rotational Atherectomy in Left Main Bifurcation: A Strategy for High Calcium Burden Lesions

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Case History-Age/Sex: 54 yrs/F presented with DOE NYHA functional class II

EKG poor progression of R wave, ECHO showed mild LV dysfunction with LVEF 45%

Non-smoker, non-alcoholic

H/O Dyslipidemia, hypertension, uncontrolled type 2 diabetes mellitus

CAG, revealed multi-vessel coronary artery disease; the patient was assessed as a high-risk patient, denied to CABG due to poor targets

Angiography suggestive of calcified LM triple vessel disease with non dominant RCA. Medina classification 1,1,1

Procedure-ROTA Ablation with 1.5 burr from LM to LCx & LAD

Wire was parked in LCx and lesion was predilated with 2.5*12 NC balloon. DES 3.5*40 was deployed at 15 atm Wire was crossed by struts in LAD and struts were dilated with 1.5 & 2.5*10 NC balloon. DES 2.75*40 was deployed using modified t- technique at 12 atm

Final Result with good TIMI-III Flow

Key Learning Points

Left main bifurcation lesions with heavy calcification carry high procedural risk and mortality.

Rapid decision-making and minimal contrast use guided by a solid understanding of tools and techniques are crucial to reduce complications and procedural time.

Rotational atherectomy is preferred over shockwave lithotripsy in cases of long, diffuse calcifications, as a single burr can efficiently treat extensive lesions versus multiple lithotripsy balloons.

A modified T-stenting technique was utilized based on operator confidence and comfort, although mini crush or DK crush techniques have demonstrated superior long-term outcomes in bifurcation PCI.