Left Main Trifurcation Lesion

Treated with Cross-over Technique Using Drug-Eluting Stents

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Demographic Characteristics

Age: 65
Gender: male
Risk Factors: Hypertension, Smoking
Past History: History of CVA in Jan.2000 without sequelae
Family History: No

Clinical Presentation

Stable angina
Non-Invasive studies: Echocardiography – Normal
Treadmill test – Not done
Thallium scan – Not done
Cardiac Catheterization Findings

Left angiogram showed significant distal LM trifurcation, diffuse middle LAD and diffuse distal LCX narrowing lesions.

Right angiogram showed significant middle RCA narrowing lesion, which was treated with DES at 2 days ago.

Target lesion(s): 1. Distal LM trifurcation
Planned strategy: 1. Directional atherectomy at LM shaft to ostium of LAD lesion
                  2. Kissing balloonning after Cross-over stenting

Adjunctive Medication

ASA: Yes
Heparin: No
Other(s): β-blocker

LMWH: No
Nitrates: Yes

Clopidogrel: Yes
IIb/IIIa: No
Baseline Angiogram

Guiding catheter: 8Fr EBU
Wiring

Floppy (Flexi) 0.014”-300cm wire to LAD
Floppy (BMW) 0.014”-190cm wire to LCx
Choice PT 0.014”-182cm wire to RI
Directional Atherectomy at LMCA

Flexi-cut 3.5-4.0 mm at LM to ostium of LAD
After DCA at LMCA
Stent Positioning

Cypher 3.5x28 mm at LMCA to proximal LAD
After Stenting

Post-LM to prox LAD stent
Additional Balloon Dilation

LM to prox LAD : Ryujin 4.0x20 mm upto 4.46 (16atm)
LM to prox LCx : Sprinter 3.0x20 mm upto 3.15 (10atm)
Kissing Ballooning

LM to prox LAD : Black-Hwak 3.5x20 mm upto 3.72 (10 atm)
LM to prox LCx : Sprinter 3.0x20 mm upto 3.15 (10 atm)
Final Angiogram
Brief Case Summary

A 65 year old man was admitted with effort chest pain. His risk factors were hypertension and smoking. Baseline ECG and echocardiography were normal. Coronary angiogram showed significant distal LM trifurcation, diffuse middle LAD, diffuse distal LCX, and middle RCA narrowing.

Teaching Points

1. Stenting techniques for LM distal trifucation lesion