1019 Distal Left main calcified bifurcation lesion with difficult LAD angulation managed with reverse wire technique .

Patient data and present history

? The patient was 78 years old male with a history of hypertension and ex-smoker presenting with typical chest pain , ECG;AF with rapid ventriclar response ,no specific ST abnormality Presentented with NSTEMI killip III,and on mechanical ventilation,Cardiac echo; LV diffuse hypokinesia especially anterolateral wall ,atrial septal aneurysm, mild MR(EF 47%),ECG;AF with rapid ventriclar response ,no specific ST abnormality. Medication in ER (Aspirin 300 ,heparin 5.000 and ticagrelol 180 mg .

? Coronary angiography

we decided to puncture left radial artery (RA),a 6-7 FR glide sheath was introduced via left RA and a 6 six French ikari left (IL) 4.0 guiding catheter (GC) was used to engaged right coronary artery (RCA) and left main coronary artery (LMCA). Coronary angiography(CA) showed Difussily disesed p-m-d-RCA up to 70% stenosis and Critical heavy calcified subtotal LM.

Strategy :(SYNTAX Score I 32and Euro score II 23.019 %)

After family discussion : decision to do PCI.

Plan:

1.Heparin bolus :4.000 IU.

2. Changed guiding with 7F EBU 4.0.

3-Cross over stenting LM-LAD .

4.Haemodynmic support (IABP standby and ECHMO team was ready).

? In order to perform (PCI), 7FR IL 4.0 was used to engage the LMCA.A versaturn GW was advanced to LCX and We tried 1st to pass runthrough to LAD but failed .So, we decided to do reverse wire technique for LAD with double lumen catheter support(crusads) .We did it three times using FC guide wire ,two wires were brocken ;one was from IVUS catheter .After balloon predilatation ,we exchanged FC with runthrough with double lumen catheter help. A 3.0x15mm and 3.5 x15mm high pressure balloons were used for predilatation of LM-LAD.IVUS was done for sizing the vessel. A two overlapping DES (3.0X33MM and 3.5 x28mm)were deployed from mid LAD to LM ostium with guideliner support ,followed by ,postdilatation with a 4.0x15 mm high pressure balloon for LM(POT)stent and 3.0x15mm high pressure balloon for p-m-LAD stent.IVUS was done for LCX (MLA 3.5 mm2).Then, a3.0x15mm high pressure balloon was used for predilatation of LCX ostium, subsequently, a DES (3.5 X28mm)was deployed at LM-LCX with little protrusion in LM (TAP).followed by,postdilatation with 3.5 x15 mm high pressure balloon and kissing (3.5 x15mm and 3.0 x15mm).IVUS was done for LM-LAD showed some malapposition at p-LM . so, 4.0x15mm high pressure balloon was used again (more POT).IVUS check to LCX showed stent was well apposed and no edge dissection. acute instent thrombosis at LM-bifurcation,repeated balloon inflation ,thrombectomy were done and additional 4000 heparin was given.

Finally TIMI III flow and no thrombus residual .

Result and follow up.

? Successful PCI to LM bifurcation with bail-out TAP technique.

? Acute hypoxemic respiratory failure,status post endotracheal intubation and mechanical ventilation 2019/2/13~2/16,extubation on 2019/2/16.

? 16/2 ,AF with rapid ventricular response ,CHA2DS2-VASC:3 ,HAS ?BLED:3 ,so triple therapy for one month.

? 2/27,patient was discharged.

Take home message

? Reverse wire technique is challenging especially in LM with diffuclt angle and heavy cacification.

? Crusade microcatheter facilitate reverse wire technique.

? Be carefule, you should exchange reversed wire with new one before IVUS check.

? TAP is a good option as a bail-out strategey to provisional stenting with angle 70:90.

? Acute stent thrombosis is a night mare especially during complex and prolonged procedure .So , regular ACT monitoring is essential.