

C083

PCI for tight RCA lesion support with Heartrail catheter in patient with anomalous origin of the right coronary artery from the left coronary sinus

56 year old male visited emergency room due to dyspnea on exertion. He had a history of COPD, hypertension and diabetes. ECG on emergency room showed LVH and T-wave inversion on II, III, aVF, V5 and V6 without ST segment change. Among laboratory markers CK (442U/L) and CK-MB (8.18ng/mL) showed mild elevation but troponin was in normal range. Echocardiography showed normal LV function (EF = 60%) without regional wall motion abnormality. There was no problem in renal function (Cr 0.8mg/dl) so we decided to perform a coronary CT angiography(CCTA). CCTA revealed aberrant origin of RCA from left coronary sinus with stenosis at RCA origin and significant tight stenosis of mid to distal RCA. There was also mid-LAD stenosis.

By right radial approach coronary angiography was done. Left coronary angiogram showed about 50-60% stenosis of m-LAD. And right coronary angiogram revealed aberrant origin of RCA from Lt coronary sinus, significant stenosis of proximal part of m-RCA and near total occlusion of mid to distal ? RCA with TMI 1 flow.

RCA intervention was decided. Right femoral artery was punctured with 7F Terumo sheath. Many guiding catheter were tried to engage RCA (7F AL1, 7F AL2, 7F JR4) however all failed and finally JL4 catheter was engaged but the support was not good. Wiring was tried with 014" Sion with microcatheter (Finecross, Terumo) support but failed due to poor guiding support. So we decided to use mother-child technique with Heartrail catheter(Terumo). Heartrail insertion to RCA with only wire support was failed. So after wiring to RV branch at proximal part of lesion Heartrail advanced successfully with anchoring balloon (2.0 x 15, Sapphire). Guiding support was much improved and stable, 014" Sion with microcatheter was pass fail and finally 014" Fielder XTR was successfully passed the lesion. Microcatheter passed to the distal part of lesion and wire exchanged to 014" Sion. Previously used 2.0 x 15 mm balloon was pass fail, but 1.0 x 15 mm ballloon was passed the lesion and stepwise POBA was done(1.5 x 15mm, 2.0 x 15mm). Two stents (Xience 2.75 x 38mm, Xience 4.0 x 23 mm) was inserted successfully, additional high pressure balloon(3.5 x 15) was done due to residual stenosis on IVUS. Procedure was finished and he discharged 2 days after PCI with dual antiplatelets. Now he is no problem on 8 months of outpatient department follow up.