

## 1052 Reverse Wiring of Anomalous RCA during CPR and Primary PCI

### History of presenting illness

Ms LYC, an 86-year-old frame walker, had history of chronic kidney disease (Baseline creatinine clearance around 20-25ml/min), hypertension, diabetes on insulin, hyperlipidemia, gout and ischemic stroke. She was brought to emergency for vomiting and lying on floor at home. Blood pressure at emergency triage was 80/25mmHg, pulse was 35bpm. ECG showed ST elevation at lead II, III, aVF, V5 and V6. Bedside echo revealed impaired left ventricular systolic function (LVEF 45%) and hypokinetic inferolateral wall. (See ECG)

She was therefore put on Dopamine infusion and taken to the catheterization laboratory for primary PCI.

### Intervention

Left main was engaged with JL3.5 catheter, angiogram showed ostial and distal left main 50% stenosis, ostial to proximal LAD 70% stenosis, mid-LAD 90% stenosis, ostial LCx 50% stenosis and mid-LCx 90% stenosis. (See Left Coronary Angiogram 1 and 2)

There was difficulty in locating RCA despite using various catheters including JR4, AL1 and pigtail catheter. (See Attempted Right Coronary Angiogram 1, 2 and 3) RCA was finally visualized by non-selective injection on the left cusp with AL0.75. (See AL075) SAL was seated just outside of RCA ostium. Non-selective injection showed critical lesion at proximal RCA (Culprit) and tight lesions at mid-RCA and distal-RCA respectively. (See SAL Angiogram 1 and 2)

Patient then developed PEA arrest, as a result of simultaneous contrast injection into both heavily diseased left and right system. Resuscitation with LUCUS was started. (See cardiac arrest and LUCUS)

As resuscitation went on, RCA was wired with reversed wiring technique with BMW Universal II. (Diagnosis to wire time 105minutes) Engagement was secured with Guidezilla. (See Wiring of RCA and Guidezilla) Proximal RCA lesion was stented with Orsiro 2.75/18 and ROSC was achieved. Wire was lost as a result of chest compression and difficult intubation.

Patient developed PEA arrest again after post stenting checking angiogram, which inadvertently injected contrast into both left and right system. CPR with LUCUS was again started. (See Post RCA Stenting Shot)

RCA was once again wired carefully to make sure the wire went through stent lumen. Guidezilla was again used to stabilize the system. Mid and distal RCA lesions were also stented in view of persistent ST elevation (Orsiro 3.5/40 and 3.5/15). ROSC was once again achieved after stenting. No-reflow occurred and was settled with intra-coronary 50 microgram adenosine and 100 microgram adrenaline under deep Guidezilla sitting. (See No reflow and RCA Final Angiogram)

It was decided to perform stenting of left system in view of persistent ST elevation. One stent was put into LAD (Onyx 2.25/26) and finally ST changes resolved. Spontaneous upper limb movement could be seen towards the end of procedure. (See Left Side Stenting and Left Side Final Angiogram 1 and 2)

#### Outcome

She was put on IABP, dopamine and noradrenaline infusion. Respiratory and circulatory support were gradually weaned off. Patient declined staged PCI to left main system in fear of contrast induced nephropathy.

Patient was discharged on day 68 after rehabilitation, with functional status similar to that before admission.

#### Conclusion

We reported a case of reversed wiring of anomalous RCA during CPR and primary PCI on a frail lady, during which we also encountered cardiac arrest as a result of simultaneous contrast injection into both heavily diseased left and right system.