PCI in an Anomalous RCA with its ostium located near the LCA ostium with posterior and upward take-off.

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Patient Profile

- MH, a 45 yr old Bangladeshi gentleman
- CAD Risk factors: HTN, DM, Dyslipidemia, Smoker, FH+
- Complained of exertional angina class-III for two weeks followed by low grade rest pain for 3 days
- ECG: ST–T changes in the inferior leads.
Trans-Radial CAG:

- Trans-Radial angiography showed, RCA ostium was found to be located very near to the LCA ostium with posterior and upward take-off.

- LM: Mild distal plaque, LAD: 50-60% Proximal LAD plaque, LCX: 80% Mid segment plaque, RCA: 95% Mid segment plaque
CAG of Left System

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Anomalous origin of RCA (Left Coronary sinus, next to the LCA ostium facing superiorly)

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Because of the ECG changes, it was clear that the RCA was the main culprit lesion and opted for PCI first.

PCI via the trans-femoral approach because of the anomalous origin of the RCA was carried out.
Prior to PCI, a temporary pacemaker lead was placed in the RV apex (Bradycardia).

We tried JR, RCB, XB, Multipurpose, Hockey stick1, AR1, and AL-1 guides, but all failed to engage selectively. Finally XB guide catheter was manually shaped and made suitable for the anatomical variation.

RCA ostium engaged non-selectively

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Galeo Floppy wire was advanced across the lesion in the RCA to keep the guide catheter engaged non-selectively and placed distally in the PDA.
lesion was dilated with a 2.0x10mm balloon at 12-14 atm
Mid RCA lesion was stented (Libertte bare metal) 3.5x12mm stent at 16 ATM

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Post stenting TIMI III distal runoff
Final Cine showed excellent opening of Mid RCA plaque with immediate relief of symptom
PCI of LCX was carried out 15 days later

LAD lesion left on medical management
Follow-up CAG 2 years after the PCI shows fully Patent RCA Stent
Conclusion

- Unstable symptoms of Patient resolved immediately after PCI
- Patient was discharged in a stable haemodynamic condition. PCI to his left system was done uneventfully after 10 days.
- Anomalous origin is unpredictable for successful PCI and post-procedural complications.
- Posterior and upward facing of this patient's RCA gave little room for good guiding support.

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- It is usually difficult to deliver a stent if selective engagement of the guiding catheter is not possible.
- Pre-procedural catheter selection is not feasible in all cases, and there is a risk of ostial dissection.
- Because of small size stent with flexible delivery system, we managed to do this without any complication.