Percutaneous Intervention in Takayasu’s Aorto-arteritis

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Case History

• 20 yrs old boy CR No. 4806371, presented in December 2011, with:-
  – HTN from 1 year on ACEI drug.
  – B/L upper limb claudication Rt > Lt.
  – Post meal abdominal pain from last 6 months.
• Examination- BP in both UL – 110/80 mmHg, feeble brachial arteries, BP in both LL 170/80 mmHg.
• Rt supra-clavicular bruit +. Rest N.
• 2-D Echo Normal. CXR Normal.
• Blood sugar 76mg%, urea/Creatinine 22/0.6mm%,
• ESR 20 mm in 1st hr, CRP negative
• CT angio Abdominal aorta- 95% osteal stenosis of celiac trunk, 70% stenosis of SMA, 90% stenosis of Rt Renal artery. Abdominal aorta Normal.
• Diagnosis- Takayasus Aortoarteritis (TAA) – inactive phase type III, involving aortic arch and abdominal aorta vessels.
Angiogram

Rt SCA 90% diffuse long segment stenosis

26th Dec 2011
Lt SCA 70% stenosis
Coronaries, bilateral carotids were normal.

Rt RAS 90%, Lt RA normal
Angiogram

Prox SMA 70% stenosis
Gradient of 50mmHg

CT 90% osteal stenosis,
Retrograde filling from SMA

26th Dec 2011
PTRA + Stenting

7F RDC Renal Guide (Medtronic), ATW Coronary guide wire. Lesion pre-dilation with 2.5X20 then 5X20 mm balloon, Very hard lesion, difficult to dilate it.
PTRA + Stenting

6X24 mm Genesis BES deployed at 12 atms. Ostium flared at 14 atms.

26th Dec 2011
Rt Subclavian artery stenting

7F long Sheath (Cook) for cannulation of Rt Subclavian artery.
ATW coronary guide wire across the lesion.
Pre-dilation with 5X20 mm balloon. – Hard lesion having difficulty in dilatation.

26th Dec 2011
Rt Subclavian artery stenting

Wire changed to 0.018 inch Road Runner wire.
7X120 mm Zilver Cooks SES deployed, post dilated with 5X20 mm Balloon.
Good flow achieved.
Lt Subclavian Artery stenting

7F long Sheath (Cook) for cannulation of Lt Subclavian artery.
0.018 inch Road Runner wire across the lesion.
A 7X29 mm Genesis BES directly deployed at 14 atms, good flow achieved.
There was no pressure gradient in both the arms after stenting.
Mesenteric Revascularization.

- Needs brachial approach for Celiac trunk stenting.
- Performed in 2nd sitting.
Celiac trunk stenting

Patent well dilated SES of Rt subclavian artery.
7 F Rt brachial long sheath.
Celiac Trunk (CT) cannulation with JR 3.5, 6F coronary catheter via femoral route.
A 300 cm exchange length 0.014 inch RoadRunner wire across the lesion via Rt brachial.
CT lesion pre-dilated with 4.5X15 mm balloon.
7X18 mm Genesis BES deployed.

5th Jan 2012
SMA lesion crossed with 0.014 inch Road runner wire. A 7X24 mm BES was deployed. Brisk flow achieved in SMA.
Post intervention
Abdominal Aortogram

5th Jan 2012
Conclusions

- Young boy with inactive phase of TAA type III.
- Symptomatic chronic mesenteric ischemia, bilateral UL claudication and secondary hypertension treated with percutaneous stenting.
- 2 months follow-up-doing well.