Complex interventions in abdominal aorta and its branches in children with Takayasu arteritis

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Disclosure

Speaker name: **Prof (Dr) Rajesh Vijayvergiya**

I have the following potential conflicts of interest to report:

- [ ] Consulting
- [ ] Employment in industry
- [ ] Stockholder of a healthcare company
- [ ] Owner of a healthcare company
- [ ] Other(s)

- [✓] I do not have any potential conflict of interest
Introduction

• Takayasu arteritis (TA) is a chronic inflammatory disease of the aorta and its major branches.
• The basic pathology is pan-arteritis that begins from the adventitial layer and spreads upto intimal layer, thereby leading to vascular manifestations.
• The clinical manifestations of TA in children are non-specific including anorexia, weight loss, fever and arthralgia. It is an important cause of secondary hypertension in children, especially in south Asian region.
Introduction

• Anti-inflammatory therapy is mainstay of the treatment for the control of vascular inflammation.
• Those with significant symptomatic occlusion of aorta and its branches need either surgical or percutaneous endovascular revascularization.
• Endovascular treatment has shown the promising results in treating stenotic lesions of TA.
• There are limited studies about endovascular intervention of abdominal aorta and its branches in children with TA.
Case 1.

- An 11-year-old girl presented with history of fever, headache and post-prandial abdominal pain of 3-months duration.
- On examination, she had high blood pressure in both upper limbs (154/90 mmHg, > 99th centile), feeble bilateral lower limb pulses and an abdominal bruit.
- Laboratory investigations revealed anemia (hemoglobin 90 gm/l), elevated ESR (86 mm in 1st hour).
Angiography

luminal narrowing of supra-renal Aorta normal bilateral renal arteries.
>90% narrowing of both celiac artery (CA) and SMA.
PTA + Stenting

Aorta- 18 X 60 mm self-expanding stent (Wallstent)
SMA and CA – 7 X 18 mm BES (Herculink, Abbott Vascular)
Follow-up course

• Asymptomatic at 4-years of follow-up.
• BMI increased from baseline of 15.09 kg/m$^2$ to 19.9 kg/m$^2$, at 18-months of follow-up.
Case 2

- A 10-year-old boy presented with fever and headache of 3-months duration.
- On examination, he had high blood pressure in both upper limbs (172/100 mm Hg, >99th centile) and feeble pulses in both lower limbs.
- Elevated ESR (106 mm in 1st hour) and high CRP (46.6 mg/l), normal renal function (urea 42 mg/dl, creatinine 0.8 mg/dl), 2+ urine albumin.
asymmetrical circumferential mural thickening with ulceration of renal and infra-renal abdominal aorta causing up to 50% stenosis, complete ostial occlusion of left renal artery with distal reformation
PTA + Stent

His blood pressure could not be controlled despite optimal 3-drugs anti-hypertensive regimen, hence subjected for percutaneous intervention at 4-months of follow-up.

14 X 60 mm self-expanding stent (Epic stent, Boston Scientific)
As hypertension persisted despite aortic intervention, he underwent open surgical auto-transplantation of left kidney after a month. His blood pressure could be controlled with amlodipine and labetalol (blood pressure 120/88 mmHg) during 4-yrs of follow-up.
Thanks
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