SCHOOL OF MEDICINE
SURGERY

Video Presentation 3

Complex Aortic Reconstruction for a Type IV Mid Aortic Syndrome

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Introduction and Methods: Mid Aortic Syndrome (MAS) is a rare pathology of the thoracic and abdominal aorta characterized by hypoplasia of both the great vessel and the origins of its tributaries. Clinical manifestations are based on increased afterload and hypoperfusion of arteries branching from involved segments.We present a unique case video of how this syndrome was addressed in a young patient with a type IV MAS, which is classified by supra and infra-renal involvement.He consented to publication of his case and images and IRB approval was waived for publication.

Results: After discovering that this patient suffered from a type IV MAS that presented with refractory renovascular hypertension, heart failure, and buttock and lower extremity claudication, the patient underwent pre-operative aortogram. Considering a lack of mesenteric symptoms (eg weight loss), the patient's reconstruction involved a descending thoracic aortic end-to-side anastomosis to an infrarenal aortic end-to-side anastomosis. Both of his renals were also bypassed to the graft, on the left with saphenous vein, and on the right with dacron. His native aorta was occluded with an endovascular amplatzer plug to prevent steal from his native aorta, which still supplied his mesenteric arteries.

Conclusions: The patient tolerated the surgery well, and is now on monotherapy for his hypertension with remission of his heart failure and claudication. This demonstrates a targeted approach for this disease process rather than reconstructing all involved arterial tributaries.