Unconventional hybrid repair for a complex type II thoracoabdominal aortic aneurysm: how to manage iliac access, visceral vessels, aortic tortuosity and spinal cord ischemia

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INTRODUCTION

A 60-years-old woman, affected by hypertension and coronary artery disease, was referred to our center for management of a 68mm type II TAAA. Computed tomography demonstrated several notable features of his aortic anatomy, including CT occlusion, small iliac access and extreme severe tortuosity. The patient had a paraplegia with complete open or endovascular procedure.

RESULTS

No Paraplegia
No endoleaks
Good Patency/accomodation
6 M FU: 68 >> 62 mm

MATERIALS AND METHODS

I STEP: dacron bypass from LCA to LCA, was performed to represent the inflow for double visceral PTFE bypass (LSA and LRA) and an iliac conduit for TEVAR. The Vortec Technique was used for LCA and LRA anastomoses.

II STEP: LCCA-LSA bypass and LSA embolization were performed.

III STEP: TEVAR stage started from abdominal portion up to the aortic arch. A covered stent for RRA (periscope) was positioned from below (R-CFA) and first endograft was introduced in dacron bypass through percutaneous access. Then a second stent was positioned (reverser sandwich) between first two stent endograft to inflow a minimal sac perfusion and reduce the risk of SII. Other two thoracic endograft were positioned to extend endovascular repair up to LCCA. In the aortic arch, the severe tortuosity caused intimal difficulty that was overcome with a modified brachiofemoral through-and-through wire, stabilizing a supersnare wire with sheath and snare up to the aortic valve.

IV STEP: Another endograft was positioned (dacron bypass through surgical access) to cover sandwich stent. No endoleaks occurred with completion angiogram.

RESULTS

Final CT-scan-control showed a correct endograft position and accomodation, patency of surgical bypass and periscope without signs of endoleaks. The patient was discharged in good general condition, with stable FU-imaging at 1-6-12 months.