Combined TEVAR and EVAR to treat Thoracic Type IB Endoleak and Infrarenal Abdominal Aortic Aneurysm

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ABSTRACT

This is a 76 years old male patient who presented with type IB endoleak from the distal end of a stent graft deployed for TEVAR since 7 years. This was combined with an infrarenal AAA involving both common iliac arteries. At the work station, his thoracic dimensions were as follows: previous stent diameter 40 mm, diameter just before the celiac artery 33 mm and distance between the stent and celiac artery 90 mm. As regards his abdominal part, the maximum AP diameter was 6.2 cm.

Cook TX2 stent graft was selected for TEVAR and Cook Zenith Flex was selected for EVAR. Bilateral CFA and left brachial cut down were performed. The TEVAR stent (40 mm x 40 mm) was introduced from the right femoral side into the previous thoracic stent. The distal end of the stent was successfully deployed just above the artery of Adamkiewicz, to guard against spinal ischemia. Then the main body of the EVAR stent (28 mm x 82 mm x 112 mm) was introduced from the right side. The contralateral gate cannulation was only successful from the brachial approach. Contralateral limb (13 mm x 90 mm) was deployed followed by bilateral limb (16 mm x 90 mm). After 90 minutes of radiation exposure and 520 ml of contrast injection, thankfully completion angio showed patent mesenteric, renal and hypogastric arteries and no endoleaks. Patient had a non-eventual recovery and was discharged 3 days later.

BACKGROUND

Stent diameter 40 mm
Diameter just before the celiac artery 33 mm and distance between the stent and celiac artery 90 mm.
AAA conical neck that 22 mm in diameter and 17 mm in length
Maximum AP diameter was 6.2 cm.

TYPE I B ENDOLEAK

TEVAR

Cook TX2
40 mm x 40 mm
Artery of Adamkiewicz

EVAR

Cook Zenith Flex
Main body of the EVAR stent 26 mm
The contralateral gate cannulation from the brachial approach

RESULTS

TEVAR

EVAR

Conclusion

This was the first time in our center to perform combined TEVAR and EVAR in the same setting. Achieving such an outstanding result has encouraged our vascular surgery team to be more confident and enthusiastic in management of TEVAR complications and thoraco-abdominal aneurysms.