

EFFECTIVE DISTAL EMBOLIC PROTECTION DURING ARCH TREATMENT WITH THE NEXUS™ STENT GRAFT SYSTEM



PATIENT INFORMATION

A 72 year-old male patient with systemic vascular disease. Previous aneurysmal thoracoabdominal branched endovascular repair.



REASON TO TREAT

An 8.2cm saccular mid arch aneurysm. A high thrombus load was noted through the entire aortic arch, lining along landing zones in both the ascending aorta and brachiocephalic trunk. A large plaque was also seen at its origin. (Figure 1). Unfit for open surgical repair, the team decision was to proceed with the endovascular management of the diseased segment of the aorta with the NEXUS™ Arch Stent Graft System. To mitigate clinical sequela in this high-stroke-risk patient, distal embolic protection was also decided as necessary.



DEBRANCHING

Left Common Carotid Artery to Right Common Carotid Artery bypass was performed 2 weeks before the scheduled NEXUS™ implantation date.



DISTAL EMBOLIC PROTECTION

Directly prior to NEXUS™ a SpiderFX™ Embolic Protection Device (Medtronic) was placed via the Right Radial Artery into the origin of the Right Common Carotid Artery (Figure 2).



NEXUS™ IMPLANTATION

The endovascular procedure was successfully performed implanting the NEXUS™ Stent Graft System.



PROCEDURAL OUTCOME

Post stent graft deployment completion, the embolic protection device was removed and inspected showing clearly captured debris dislodged during the procedure (Figure 2). The deployed NEXUS™ Stent Graft successfully excluded flow from the mid arch pathology (Figure 3).



PHYSICIANS COMMENT

NEXUS™ was chosen to treat this anatomy due to its possibility to reduce manipulations in the arch.

The stroke risk was high for this patient due to high thrombus load, so as a team experienced in treating carotid stenosis and ischemic strokes with mechanical thrombectomy, we decided to also use distal embolic protection which when we removed post procedure had captured debris and **prevented a CVA.**

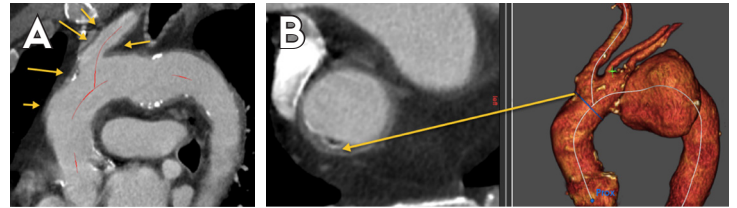


Figure 1.

(A) Computed tomography angiogram illustrates thrombus load within the ascending, aortic arch and Innominate Artery.

(B) Computed tomography angiogram and 3-dimensional reconstruction illustrates plaque within the ascending aorta.

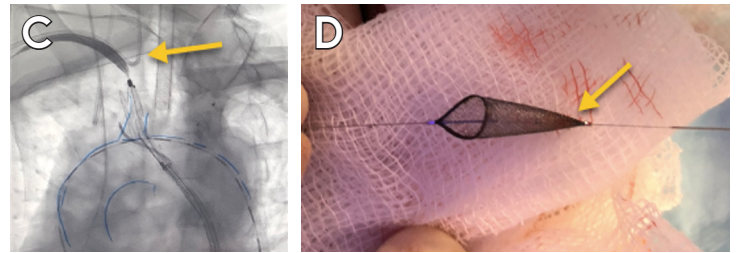


Figure 2.

(C) Embolic protection device catheter visible, placed parallel to NEXUS™ Delivery System.

(D) Post operatively embolic protection device removed showing captured debris within its tip.

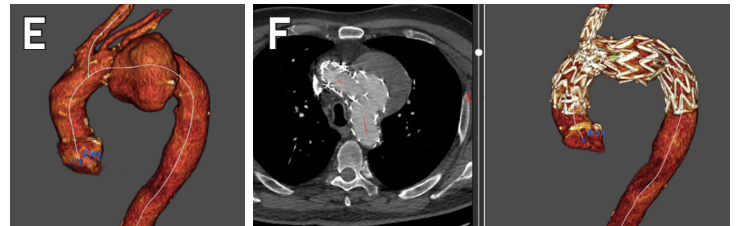


Figure 3.

(E) 3-dimensional reconstruction generated from pre-operative computed tomography angiogram illustrates the mid-arch aneurysm.

(F) Post-operative computed tomography angiogram and 3-dimensional reconstruction illustrates total exclusion of the aneurysm.



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