Late type IIIb Endoleak with an Endurant Endograft: Coil Embolisation

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**Purpose:** Our case report is intended to share successful coil embolisation of a late type 3b endoleak (14 months after deployment) with an Endurant endograft.

**Method and Result:** An 81-year-old man underwent EVAR for the treatment of a 70mm AAA with deployment of 36x16x166mm main body Endurant bifurcated endograft, 16x20x120mm contra lateral limb and extensions of 16x16x95mm to the right and to 20x20x80mm to the left. His medical history included heart failure with an ejection fraction of 25%, hypertension, chronic obstructive pulmonary disease and chronic renal failure requiring hemodialysis.

He has been followed regularly with computerized tomography (CT) angiography at 3, 6, 12 months showed successful exclusion of the aneurysm sac with no leak (Figure 1a).

About 14 months post EVAR, the patient was admitted to the emergency clinic with sudden onset back pain. Computerized tomography showed enlarged AAA bounded with hematoma and an endoleak originating from distal main body of the EVAR graft (Figure 1b).

Several angiography runs were performed to determine the location of the endoleak. We suspect a type 3b endoleak (Figure 2a). We decided to deploy an Endurant uniliac stent graft with a body diameter of 36mm (36x14x105 mm).

The control angiogram showed persistent endoleak despite additional ballooning. We decided to coil embolize the fabric tear and aneurysm sac through the gap between the two-stent grafts. The gap was catheterized with 5F vertebral catheter than 2.7F micro catheter inserted into the aneurysm sac through the fabric tear (Figure 2b).

We coiled the aneurismal sac with detachable coils until the angiography showed the complete disappearance of type 3b endoleak (Figure 3a).

Control CT examination denoted no contrast filling into the sac, there was peripheral high-density area in the sac, which could be related to fresh clot or residual contrast media during coils embolization (Figure 3b). Doppler ultrasonography also confirmed no filling in the sac.

**Conclusion:** Type 3b endoleak can occur on a new generation endografts and it is associated with high-risk aneurysm rupture morbidity and mortality. It is difficult to diagnose the type of the endoleak only with CT angiogram without catheter angiography.

We did not know the reason of the fabric defect after 14 months after the deployment. In the literature, there are reports about type 3b endoleaks with other aortic stent graft devices but there was only one case report about early type 3b endoleak associated with Endurant endograft.

Our case is the first case of a late type 3b endoleak reported with an Endurant stent graft.