A case of trapped VIABAHN string in the AFX skeleton successfully bailed out using laparoscopic scissors.

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Disclosure

• Speaker name:

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• I have the following potential conflicts of interest to report:
  □ Consulting
  □ Employment in industry
  □ Stockholder of a healthcare company
  □ Owner of a healthcare company
  □ Other(s)

• I do not have any potential conflict of interest
Purpose:

AFX is a uni-body design stentgraft system with an internal skeleton for AAA.

We report a case of trapped VIABAHN deployment string in the AFX skeleton which was successfully bailed out using laparoscopic scissors.
Case:

85 years old man

Past illness: Hypertension, Hyperlipidemia, PCI history.

Present illness:

He referred to our hospital because of intermittent claudication of 200 m. CT revealed moderate dilatation of the lower abdominal aorta, and chronic bilateral common iliac dissection with mild dilatation and luminal stenosis.

We planned the aortic and iliac stentgraft (AFX and VIABAHN) to treat these lesions.

Examinations:

ABI: Rt. 1.22 / Lt 0.73

Blood exams:

CRE 1.02mg/dl, BUN 19mg/dl, Hb 15.7g/dl
Mild dilatation of the lower Aorta.
Enlarged bil. common iliac arteries with chronic dissection, and luminal stenoses.
Our treatment plan.

AFX implantation from Aorta to bil. common iliac a. was planned. Lt. common iliac artery was too long to cover the whole length by the only AFX leg. Left iliac extension with VIABHAN was planned.

We selected
AFX main body (28mm100mm/16mm40mm)
VIABAHN (11mmx50mm).
**Procedure:**

The main body of the AFX was successfully deployed. After that, we started to insert the VIABAHN in the left leg of the AFX.

![Images of medical procedures](image1.png)
We inserted the VIABAHN in the left leg of the AFX. The deployment string was completely trapped by the AFX skeleton at the level of the iliac bifurcation.
We tried to release the string by angiographic catheters, balloon catheters and so on but in vain. VIABAHN was unexpectedly deployed at Lt. external iliac a. and inside the sheath when removing the delivery catheter. Deployment string still remained inside the vessel.
We inserted a 6F guiding catheter along the deployment string to release the string. But failed.
We decided to cut the string by scissors directly. But how?

Still trapped and fixed by the skeleton.

The string is so hard to release bluntly that we tried to cut the string directory in the vessel.

5mm shaft = 15F
Change Dry seal from 12F to 24F.

Laparoscopic scissors was inserted. Deployment string was cut successfully.

Excluder leg (12mmx100mm) was deployed to stabilize the remnant string.

Deployment of excluder leg (12mmx70mm) in rt. common iliac artery was added.
Post procedural CT

Intermittent claudication was improved to 1000m.
Teaching points 1:

AFX has an internal skeleton. VIABAHN doesn’t have an outer cover layer like the excluder leg, and fixed by a deployment string. VIABAHN is released by untightening the string outside the graft. Our episode happened in these device-related backgrounds.

To avoid these situations, we have to think about the device selection, delivery sequence. VIABAHN should be deployed under the over-sheath condition in some cases.

Similar episode has reported in the SFA area after BMS placement. Sakaguchi S et al. JES2019.
Teaching points 2:

The deployment string is so tough that we could not cut it bluntly. Laparoscopic scissors were needed. We used a 5mm diameter scissors. 3mm scissors are also on the market, we can use these devices even in the small caliber sheath.

Deployment string is not a string but like a net.
Take home message:

We can use a laparoscopic scissors in the artery.

Thank you for your kind attention.
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