A case with true deep femoral artery aneurysm who successfully underwent restoration using stent-grafts

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**Background**

True deep femoral artery aneurysms; t-DFAAs are extremely rare, that carry higher risks of rupture compared with other peripheral arterial aneurysms.

Although open surgery is an invasive treatment for elderly and flailed patients. However, endovascular treatment for t-DFAAs had been rarely reported

An 81-year-old male with partial remitted stage IV lung cancer was referred to our department for treating the left t-DFAA.

Computed tomography (CT) revealed the trend of enlargement of the t-DFAA, which was about 51 mm in diameter.

Since surgical treatment was impossible for his decreased respiratory function, we decided to treat t-DFAA by EVT with covered stents and coils.

**Endovascular treatment**

1. **Coiling**

   - Vascular plug 4
   - Coils

   An 8Fr sheath was inserted via the right CFA to the left CFA contralaterally.

   We embolized the deep femoral artery branch flowing into the aneurysm using coils and vascular plug to prevent type 2 end-leak.

2. **Covered stents deployment**

   - VIABAHN VBX 8.0/59
   - VIABAHN 8.0/100

   An 8.0/100mm VIABAHN was implanted in the distal DFA and an 8.0/69 VBX in the just proximal DFA with overlapping.

   The two stents were completely separated caused by shortening VBX stent by post dilatation.

   An 8.0/59mm VBX was additionally implanted between them.

   Two stents were separated!

   Type 1 end leak

   Final Angiogram

   S.M.A.R.T 14.0/40

**Clinical course**

At his 6-month CT scan follow-up, the graft was patient with shrinkage of the aneurysm.

**Discussion & Conclusion**

Reported treatments for DFAAs have included ligation, resection with revascularization, and coil embolization. Because DFAs could be significant sources of collateral flow for femoropopliteal lesions, the treatment including revascularization should be performed as much as possible.

EVT using covered stents and coils could be an efficient and minimally invasive treatment option for the aneurysms of the deep femoral artery.