Branched iliac stent graft- be prepared rupture can happen and not the only rupture

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Case description:
A 61-year-old male with incidental discovered left common iliac artery aneurysm 4.5 cm in diameter (fig.1 A and B). He has lymphoma and no another significant comorbidity. He is active and does exercise. Based on CT we decided to treat an aneurysm with branched iliac stent graft (Cook Medical) and bridging stent graft Advanta placed in the left internal iliac artery. Percutaneous access using the two Proglide preclosure suture-based devices on the both side were obtained.

The branched stent graft was advanced without difficulties (fig.2). During "trough and trough" manipulation with 12 Fr sheath suddenly the blood pressure drop and we placed the aortic occlusive balloon into the right common iliac artery and make angiography which showed the rupture of the proximal part of the external iliac artery (fig.3). The two stent graft Fluency 13,5 mm was placed and rupture were covered as well the right internal iliac artery (fig.4). The patient has been stabilized and we proceed with the intervention. The bridging stent graft was placed in the left internal iliac artery and final angiography showed complete exclusion of an aneurysm, patent branch graft on the left side, no endoleak and no sign of active bleeding on the right side (fig 5). Hemostasis was done with two Proglide and the pulse was present on the both leg after finishing the EVAR.

Five hours after EVAR patient complain about the cold left leg and impaired sensory function. Control CT showed thrombosed the branch stent graft and complete occlusion of the left pelvic arteries (fig.6). The patient has been operated acute with femoral crossover bypass because thrombectomy was not successful. During the surgery, Proglide suture was found into artery lumen. On the follow-up up to three years, there was no other complication (fig 7).

Take home message:
The external iliac artery is most prone to the rupture and is important to recognize it and has a clear treatment pathway. Percutaneous access- we try not to use when we have devices with > 18 Fr system. Surgical exposure could be the still the best option. An early check with ultrasound after EVAR could facilitate the second surgery and maybe thrombectomy will be more successful and at least one internal iliac artery could be saved.