Balloon expandable iliac stent fracture treated with aortic extension graft

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Objective: We report a case of balloon-expandable iliac stent fracture and successful implantation of aortic graft extension through two broken parts of the stent priorly treated with EVAR.

Method and Result: A 64 year old man with history of EVAR and iliac stent implantation underwent CTA 6 month after intervention. CTA revealed type 1b endoleak, newly developed iliac artery aneurysm, and the bare metal stent that previously deployed were broken into three parts.

We decide to deploy an aortic extension graft through the broken parts of the stent. All the attempts to catheterise three broken parts of the iliac stent all together were failed. We catheterise the two broken parts so we decide to deploy the graft through these two parts. We deploy Endurant 16x10x199mm graft. At control angiography, there were no more leak, iliac artery aneurysm was excluded and one broken part of the bare metal stent was pushed laterally with the graft.

Conclusion: There have been several reports of fracture or collapse of balloon-expandable stents. At our case it’s probably due to newly developed iliac artery aneurysm and changing flow dynamics. At fractured stents management can be accomplished with stent-in-stent maneuver. If fractured parts can’t catheterise all together an alternate option may be to pass the guidewire one broken part of the stent with placement a new stent.

At control CTA the graft was open and one part of the broken stent was at the lateral wall of the iliac artery.