An Intriguing Case
Sequentially Treated Both Internal Iliac Aneurysms with Stenting & Coiling Methods via Endovascular Approach

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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
A 77-year-old Male Patient, #13908472

C/C  Incidentally discovered internal iliac aneurysm

P/H  Previous history of cholecystectomy

S/H  No alcohol drinker but no cigarette smoker

V/S  BP  120/80 mmHg     BT  36.4 °C
     PR  74 /min          RR  20 /min
Bilateral access to the common femoral arteries
Bilateral access to the common femoral arteries
Placed pigtail catheter to perform the aortogram of the abdominal aorta and the iliac arteries
Showing the dilatation of lower abdominal aorta and both common iliac arteries & thrombosed aneurysm at right internal iliac artery.
We firstly planned to perform the embolization of branch vessel supplying to thrombosed anatomical part.
Three coils were used to embolize the posterior division artery.
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Three coils were used to embolize the posterior division artery.
Interim checking angiogram during the branch vessel embolization
Two coils were used to embolize the anterior division artery.
Two coils were used to embolize the anterior division artery.
Aortogram (May 20, 2015)

Interim checking angiogram during the branch vessel embolization
At last, small branch was embolized with one coil.
At last, small branch was embolized with one coil.
Interim aortogram showed still remaining aneurysmal dilatation on lower abdominal aorta and both common iliac arteries.
Main body delivery system into proximal neck
The deployment of main body stent graft (25x120 mm, ENDURANT).
The deployment of main body stent graft (25x120 mm, ENDURANT).
The gate cannulation from contralateral (left) common femoral artery access.
Aortogram (May 20, 2015)

The deployment of right-sided limb stent graft (16x120 mm, ENDURANT).
The deployment of left-sided limb stent graft (16x80 mm, ENDURANT) (bell-bottom technique)
Throwback of the delivery system
Ballooning with compliant balloon to expand and attach the endograft to the native vessel wall (at the proximal end)
Ballooning with compliant balloon to expand and attach the endograft to the native vessel wall (at the distal end)
Ballooning with compliant balloon to expand and attach the endograft to the native vessel wall (at the distal end)
Ballooning with compliant balloon to expand and attach the endograft to the native vessel wall (at the proximal end)
Completion aortogram showed good patency of all endografts with no post-EVAR endoleak.
Thrombosed aneurysmal dilatation in right (7.6 cm) and left (2.6 cm) internal iliac arteries (arrowheads).
Abdomen CT (Enhanced) (May 22, 2015)

Evidence of coiling embolization at branch vessel connected to thrombosed right internal iliac aneurysm (arrow)
Thrombosed aneurysmal dilatation in right (7.6 cm) and left (2.6 cm) internal iliac arteries (arrowheads).
Evidence of coiling embolization at branch vessel connected to thrombosed right internal iliac aneurysm (arrow)
About four years later...
About 4 years later, FU abdomen CT detected something wrong.
Increased size of thrombosed aneurysms in both internal iliac arteries (arrowheads) with evidence of coil embolization (arrows).
Increased size of thrombosed aneurysms in both internal iliac arteries (arrowheads) with evidence of coil embolization (arrows).
Aneurysmal dilatation of left internal iliac artery (to 3.9 cm) & enhanced multiple collaterals from left-sided aneurysm (arrows)
Implantation of stent graft toward left external iliac artery
blocking left internal iliac artery (crossover technique)
Implantation of stent graft toward left external iliac artery blocking left internal iliac artery (crossover technique)
Implantation of stent graft toward left external iliac artery blocking left internal iliac artery (crossover technique)
Aortogram (September 25, 2019)

Inadequate coverage of stent graft limb extension to external iliac artery (arrowhead)
Stent expansion was performed using reliant balloon catheter.
Good coverage with stent graft limb extension (arrowhead), but still remaining collaterals contributing to right aneurysm (arrows)
Several weeks later...
We found collaterals stemming from right common femoral artery supplying blood flow toward right-sided aneurysm (arrows).
We decided to treat this collateral lesion using coil embolization method.
Coiling was performed via the newly enhanced route of collaterals from right common femoral artery.
Coiling was performed for blocking the collaterals and filling the aneurysmal sac.
Coiling using Helix 12x30 mm (x2) and 10x30 mm (x4) for blocking the collateral route and filling aneurysmal cavity.
Final angiogram showed good obstruction of aneurysmal dilatation and also diminished collaterals.
Coiling embolization to branched vessels connected to right internal iliac aneurysm with endograft stent implantation (bell-bottom technique) for lower abdominal aorta and left internal iliac aneurysm (2015).

About four years later (2019), follow-up CT showed the increase in size of both internal iliac aneurysms.

Angiogram found multiple collaterals from left internal iliac aneurysm. First of all, re-do EVAR for the dilated portion of left internal iliac artery crossover technique for blocking the left internal iliac artery.

Several weeks later, the origin was determined to be left common femoral artery. Therefore, coil method was performed blocking the collateral route and filling the aneurysmal sac.
Thank You for Your Attention!
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