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Indications

- Dilated common iliac artery in the presence of otherwise suitable anatomy for EVAR
- Internal iliac artery aneurysm
- Pelvic bleeding following pelvic fracture

Essential Steps

1. Percutaneous access of the contralateral femoral artery.
2. Placement of a size 5 French sheath.
3. Introduce a wire followed by Omni Flush catheter into the aorta.
4. Perform an aortogram with iliac runoff and confirm the iliac pathology.
5. Crossing from the contralateral iliac artery into the ipsilateral common iliac artery where the interior iliac artery is to be embolized.
6. Changing the projection to an LAO/RAO oblique.
7. Replacement of the size 5 French sheath with a size 6 guiding catheter or a long 5 French (Balkin) sheath.

8. Canalization of the ipsilateral internal iliac artery.
9. Advancement of a size 5 French catheter into the internal iliac artery at the level of embolization. Insertion of Volcano/Nester Coils/Amplatzer plug into the internal iliac artery preserving flow in the distal branches.
10. Packing the coils into internal iliac artery without spilling into the common or external iliac artery.
11. Angiogram completion angiogram.
12. Reversal of anticoagulation and removal of the sheath.

Note This Variation

- Occasionally access into the internal iliac artery may be achieved through an ipsilateral approach, and other types of embolization devices with a retrievable option (Amplatzer Vascular Plug) are also available and have been successfully used for occluding the internal iliac artery.

Complications

- Extension of the coil into the common iliac artery
- Migration of the coils into the external iliac artery

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- Access site bleeding
- Pelvic ischemia
- Buttock claudication
- Sexual dysfunction

Template Operative Dictation

Preoperative Diagnosis Common iliac artery aneurysm extending into the iliac bifurcation in a patient who is otherwise a good candidate for EVAR/internal iliac artery aneurysm/persistent pelvic bleeding in a patient with pelvic fractures follow blunt trauma

Procedure Aortogram with iliac runoff; *right/left* internal iliac artery embolization

Postoperative Diagnosis Same

Indications The patient is a ___-year-old *male/female* with a large abdominal aortic aneurysm and aneurismal dilatation of the common iliac artery extending into the iliac bifurcation. The patient is otherwise a good candidate for EVAR. Embolization of the internal iliac artery is indicated to provide a suitable landing zone for the EVAR limb into the external iliac artery. The contralateral iliac artery is patent without any significant pathology. The patient has been informed of the risks and benefits the embolization of the internal iliac artery, and has agreed to the procedure.

Description of Procedure The patient was brought to the angiography suite and was placed in the angiography table in the supine position. The right and left groins were prepped and draped in the usual sterile fashion. Time-outs were performed using both preinduction and pre-incision safety checklist to verify correct patient, procedure, site, and additional critical information

prior to beginning the procedure. The contralateral groin was infiltrated with 1% Lidocaine, and the common femoral artery was accessed using a Seldinger technique. A size 5 French sheath was inserted in the common femoral artery, and a glide wire was advanced in to the aorta. An Omni flush catheter was then advanced into the aorta and an aortogram with iliac runoff was obtained delineating the anatomy. The *Omni Flush/Cobra* catheter was then used to cross over to the contralateral common iliac artery. The 5-French sheath was then replaced by a size 5/6 *French guiding catheter/5 Balkin sheath*. The tip of the sheath was parked in the common iliac artery just proximal to the take off of the internal iliac artery. A *right/left anterior oblique RAO/LAO* projection was then obtained, and another angiogram was performed delineating the orifice of the *right/left* internal iliac artery. Using an *MP/angle glade/catheter/cobra catheter*, the internal iliac artery was accessed with a 0.035 hydrophilic glide wire, and the catheter was advanced into the distal segment of internal iliac artery. An angiogram through the *MP/angle glade/catheter/cobra catheter* was obtained further documenting its position and its relationship to the common iliac artery and internal iliac artery branches. A size 10 Tornado coil/Amplatzar plug was then introduced and deployed into the desired location in the internal iliac artery preserving the collateral of the internal iliac artery. Multiple coils were introduced until the entire iliac artery was filled and packed with coils. An angiogram was then performed documenting absence of any spillage of coils into the common iliac or external iliac arteries. The catheter, wires, and sheath were then removed after the patient's anticoagulation was reversed with protamine sulfate. The sheath was removed and pressure was applied to the groin. A debriefing checklist was completed to share information critical to postoperative care of the patient.