

Interventional Radiology Coding Case Studies
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Week of February 12, 2018

Aortic & Iliac Aneurysm Endovascular Repair

Indications: 5.8 cm asymptomatic abdominal aortic aneurysm and 2.5 cm left common iliac artery aneurysm

Procedure(s):

- Ultrasound-guided bilateral common femoral artery access and Pro-glide percutaneous closure of the bilateral common femoral arteriotomies (14 French).
- Endovascular repair of an abdominal aortic aneurysm using a 29 mm Ovation with placement of 18 mm x 140 mm bilateral iliac artery limb extensions with a distal endpoint of the common iliac artery bifurcations.

Description of Procedure: The patient is brought into the hybrid operating room and placed in supine position. Patient was maintained under moderate sedation however later in the case, due to access site complexity, the patient was induced under general anesthesia with airway control with an LMA. Foley catheter was placed by surgical team. Arterial line and IV access was secured by the anesthesia team. Abdomen and bilateral groins were shaved and then prepped with chlorhexidine solution and then draped in a standard surgical fashion using loban. Surgical timeout was performed.

Bilateral groins were anesthetized with the 1% Lidocaine/0.5% Marcaine solution under ultrasound visualization and then under direct relapse visualization, using micropuncture needle bilateral common femoral arteries were accessed using modified Seldinger technique. Microwire were advanced and then after confirming the intraluminal access the left common femoral arteriotomy was successfully closed percutaneously using 2 Pro-glide closure devices using a pre-closure technique.

And then with the Bentson wire access the left femoral access was upsized to an 8 French bright tip sheath. The right common femoral arteriotomy pre-closure was not successful completely however 1 Pro-glide closure device was successfully deployed however the second one created slightly larger arteriotomy and therefore the access was expeditiously upsized to the 8 French sheath and then with a glide catheter the Bentson wire was exchanged for a mild

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wire in the right femoral access was upsized to a 14 French bright tip sheath. A 14 French sheath access is hemostatic. Therefore at this time patient was systemically heparinized. And then with a glide catheter the left sided wire access into the aorta was exchanged for a mild wire access and then 14 French bright tip sheath was parked into the abdominal aorta.

Then a 29 mm Ovation stent graft was prepped and was advanced via the right femoral access and parked at the L2 vertebral level. Via the left femoral access an Omni Flush catheter was advanced and parked at the L2 level. And then in a 20° left anterior oblique and 20° craniocaudal gantry angle and aortogram was performed. The left renal artery being the lowest renal artery was a fluoroscopically roadmap and then the Ovation device was deployed maintaining the fabric line at the left renal artery. Then the suprarenal fixation was completed and then the Polymer was injected. By the Polymer is being cured for 14 minutes, the contralateral gate was a successfully cannulated with a Glidewire via the left femoral access and then after confirming intraluminal position with a rotational movement of an Omni Flush catheter and doing an aortogram confirming an appropriate seal proximally as well as gate cannulation, and appropriate measurements were taken from the flow divider down to the left iliac bifurcation.

And then a mild wire was advanced via the Omni Flush catheter into the descending thoracic aorta and then an 18 mm x 1 40 mm ovation iliac limb was deployed from the flow divider down to the left iliac bifurcation into the common iliac artery. Then after completing the 14 minute Polymer cure time, the main body delivery was completed and then the delivery sheath was removed.

And then with an Omni Flush catheter via the right femoral access retrograde right iliac angiogram was performed and the iliac bifurcation was fluoroscopically roadmap and then an 18 mm x 1 40 mm Ovation iliac limb was deployed from the flow divider down to the right iliac bifurcation. Then bilateral iliac limbs were ironed using a 12 mm noncompliant Armada balloon bilaterally. And then a completion aortogram was performed which shows patent superior mesenteric and bilateral renal arteries with a widely patent bilateral iliac limbs with a widely patent bilateral common iliac and external iliac and internal iliac arteries.

There is no evidence of type I, type II or type III endoleaks. Therefore at this time the left common femoral arteriotomy was successfully closed percutaneously cinching down the pro-glide closure devices. Hemostasis was achieved. And then left femoral angiogram was performed with a sheath access via the right side into the aorta and which shows no evidence of any extravasation with a widely patent common femoral artery with a widely patent femoral bifurcation.

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Then the mild wire was advanced through the abdominal aorta via the right femoral access and then the sheath was removed and the single pro-glide closure was cinched down and while closing the arteriotomy partially a second pro-glide closure device was deployed successfully in the right common femoral arteriotomy and this was successful in achieving hemostasis and therefore both pro-glide closure devices and sutures were cinched down and arteriotomy was completed successfully. The patient also has a palpable distal femoral pulse distal to the arteriotomy. Then the patient was given protamine for the reversal of heparinization. At this time the distal perfusion was evaluated and patient has adequate PT signals bilaterally.

Therefore at this time bilateral skin incision was closed using a single 4-0 Monocryl subcuticular closure with the Liqui-Band dressing. And then the patient was emerged from anesthesia successfully extubated and then transferred to recovery room in stable condition.

Complications: none

Operative Findings: Successful exclusion of the abdominal aortic and the left common iliac artery aneurysms using a 29 mm Ovation stent graft with 18 mm bilateral common iliac limb extensions. Completion angiogram shows widely patent superior mesenteric, bilateral renal arteries without any evidence of type 1, 2 or 3 endoleaks. Patient has widely patent bilateral common iliac, external iliac and internal iliac arteries. The left femoral arteriotomy closure was evaluated with an angiogram in which shows a patent common femoral artery with a patent femoral bifurcation without any evidence of extravasation. Patient has PT signals bilaterally.

IV Contrast: 55 ML Visipaque LOCM 300-399 MG/ML

Fluoroscopy time: 22.4 minutes (DAP 57679.61 uGym2)

Disposition: Awakened from anesthesia, extubated and taken to the recovery room in a stable condition, having suffered no apparent untoward event.

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Interventional Radiology Coding Case Studies CPT Codes

Week of February 12, 2018

Aortic & Iliac Aneurysm Endovascular Repair

Procedure Codes:

- 34705 Endovascular repair of infrarenal aorta and/or iliac artery(ies) by deployment of an aorto-bi-iliac endograft, non-rupture (Ovation®)
- +34713 x2 Percutaneous access and closure of femoral artery for delivery of endograft through a large sheath (12 French or larger), including ultrasound guidance, when performed, unilateral
- Q9967 x55 LOCM 300-399 MG/ML

Diagnosis Codes:

- I71.4 Abdominal aortic aneurysm, without rupture
- I72.3 Aneurysm of iliac artery

Comments:

- An Ovation® endograft is a modular bifurcated prosthesis with two docking limbs. This type of prosthesis has limbs that need to be attached to the main body of the endograft and extend into the iliac arteries as described by codes 34705 and 34706. There aneurysms treated were non-ruptured, therefore code 34705 is the correct code.
- The catheterizations of the aorta are bundled with 34705 as well as diagnostic angiography of the treatment zone.
- Separate extensions terminating beyond the common iliac arteries were not placed; therefore no code was assigned for any extensions. The limbs placed were part of the main body of the endograft.
- Percutaneous access was gained though which 14 French sheaths were placed as described by add-on code +34713. This code is assigned twice. Note that the ultrasound guidance for vascular access as well as closure of the arteriotomy are bundled with code +34713.
- *Supplies are billed by the facility performing the procedure and should not be assigned for professional fee coding.*

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Applicable Coding Guidelines:

Endovascular Repair Codes (34701-34706)

- Endovascular repair codes are assigned for treatment of an aneurysm, pseudoaneurysm, dissection, penetrating ulcer or traumatic disruption with an endograft.
- Endovascular repair codes are assigned based on the vascular anatomy involved, the type of endoprosthesis that is placed and whether or not the vessel being treated has ruptured.
 - ❖ Endoprosthesis types: aorto-aortic tube (34701-34702), an aorto-uni-iliac device (34703-34704), or an aorto-bi-iliac device (34705 - 34706).
 - ❖ “Rupture” as noted in the code descriptions refers to clinical and/or radiographic evidence of acute hemorrhage.
 - If a decompressive laparotomy is performed at the same time as repair of a rupture, assign code 49000. Surgical decompression is achieved by opening the abdominal wall and abdominal fascia to create more space for the abdominal viscera.

A chronic, contained rupture (pseudoaneurysm) is not considered a rupture for coding purposes.

- Codes 34705 and 34706 describe an endovascular repair with an aorto-bi-iliac endograft which has two limbs to cover both common iliac arteries.
- Add-on code +34713 describes percutaneous access and closure of the femoral artery for delivery of endograft through a 12 French or larger sheath.
 - ❖ Code +34713 may be reported with codes 33880-33886, 34701-34708 and 34841-34848 when a 12 French or larger sheath is used.

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Applicable Coding Guidelines (continued):

- ❖ It includes ultrasound guided vascular access (+76937) for the same access site and placement of dual closure devices. Do not report +76937 separately.
- ❖ Code +34713 may be reported once per side.
- ❖ Do not report +34713 for access and closure of the femoral artery associated with procedures 37221, 37223, 37236, 37237.

Endovascular Repair Abdominal Aorta & Iliac Arteries

- Endovascular repair codes describe placement of an endograft (endovascular graft, endoprosthesis, stent graft) to treat an abdominal aortic aneurysm (AAA), pseudoaneurysm, dissection, penetrating ulcer, or traumatic disruption in the infrarenal abdominal aorta with or without extension into the iliac arteries.
- When endovascular repair is performed the following components are coded separately:
 - ❖ Exposure of access vessels (+34812, +34820, +34833, +34834, +34713, +34714, +34715, +34716)
 - ❖ Selective catheterizations (36245-36248)
 - ❖ Extensive repair of an artery (35226, 35286, 35371)
 - CPT guidance differs from the NCCI Policy Manual. In 2017 the NCCI Policy Manual, Chapter 5 added the following language: *“Repair and closure of a blood vessel utilized for vascular access during the performance of a procedure is an included component of that procedure. Repair of the blood vessel (e.g., CPT codes 35201-35286) should not be reported separately.”*

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Applicable Coding Guidelines (continued):

- ❖ Other interventions (PTA/stent/embolization) outside of the target treatment zone:
 - ❖ The target treatment zone is defined as the vessels that contain an endograft(s) (the main body, docking limb[s] and/or extension[s]) deployed during the same operative session.
 - Example: When an endograft terminates in the common iliac artery, any additional treatment of the common iliac artery is not reported separately. Only additional treatment in the external and/or internal iliac artery is reported when performed.
- ❖ Intravascular ultrasound (+37252, +37253)
- ❖ Conscious sedation (99151-99157)
- Endovascular repair surgical codes include the following components:
 - ❖ Pre-procedure sizing and device selection
 - ❖ Device positioning, manipulation and deployment
 - ❖ Non-selective catheterizations (36140, 36200)
 - ❖ Diagnostic angiography of aorta and branches
 - ❖ All radiological supervision and interpretation (RS&I): intraprocedural imaging (angiography, rotational CT), fluoroscopic guidance, roadmapping, completion angiography
 - ❖ Placement of extensions in the aorta from the renal arteries to the iliac bifurcation.
 - ❖ Treatment zone PTA/stent deployment within target treatment zone. The treatment zone is defines as those vessels that contain an endograft(s) (main body, docking limb[s] and/or extension[s]) deployed during the same operative session prior to and after endograft placement
 - ❖ Closure of arteriotomy

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Applicable Coding Guidelines (continued):

Catheterization Codes

- When performing endovascular repair procedures the catheter must be manipulated through the arterial system to perform the procedure. Selective catheterization codes may be reported in accordance with the rules for reporting selective catheterization. Non-selective catheterizations (36140, 36200) are bundled into the endovascular repair codes.
- Endovascular repair procedures are typically performed by placing the catheter in the aorta, either via unilateral access or via bilateral access. These catheterizations of the aorta (36200) are bundled with the endovascular codes 34701-34711.

Diagnostic Angiography

- An initial diagnostic angiogram of the aorta and iliofemoral arteries is included with the endovascular repair codes and should not be reported separately.
- Diagnostic angiography is reported only when it takes place in vessels outside of the targeted treatment zone. Diagnostic angiography should only be reported separately in accordance with guidelines established for reporting with transcatheter procedures.

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