Interventional Radiology Coding Case Studies
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Week of January 22, 2018

Lower Extremity Arteriogram, Angioplasty Posterior Tibial, Peroneal, Superficial Femoral & Popliteal Arteries

1. ANTEGRADE ACCESS INTO THE LEFT COMMON FEMORAL ARTERY.
2. LEFT LOWER EXTREMITY RUNOFF ANGIOGRAM.
3. RECANALIZATION OF THE POSTERIOR TIBIAL, PERONEAL, SFA/POPLITEAL ARTERIES WITH BALLOON ANGIOPLASTY.

CLINICAL HISTORY: The patient is a 34-year-old female with history of lupus and renal transplant who presents with 3-month history of ischemic rest pain to her left toes, which came on with sudden onset. Her pain is worse at night and wakes her up. It does not allow her to walk and her symptoms are therefore lifestyle limiting. The patient is currently on Clonidine, Norvasc, aspirin, and Lovenox with no improvements to her symptoms. She has history of Raynaud and is a nonsmoker.

INFORMED CONSENT: The patient's diagnosis, treatment plan/procedure, risks and benefits, treatment alternatives, complications, and prognosis with and without treatment were explained to the patient and/or patient's family in plain language. Informed consent was obtained and we were asked to proceed with the procedure.

All elements of a maximal sterile barrier technique were utilized during this procedure including cap, mask, steri e gown, sterile gloves, large sterile sheet, hand hygiene, and 2% chlorhexidine for cutaneous antisepsis Ultrasound guidance was used during the procedure. Ultrasound was initially used to establish and assess the patency of the artery to be punctured. The artery was then punctured using real-time sonography. A needle entry into the artery was visualized with ultrasound. Permanent ultrasound images were obtained.

The IV moderate conscious sedation was supervised by the operating physician(s) using fentanyl and Versed for 2 hours and 15 minutes. The patient was independently monitored by the IVR nurse. There were no complications.

Fluoroscopy Time: A total of 31.3 minutes of fluoroscopic x-ray time were utilized to perform this procedure.

Contrast: A total of 53 mL of LOCM 300-399 MG/ML contrast was utilized during the procedure.

PROCEDURE: The patient was brought to the angiography suite and was placed supine on the angiography table. The left groin was then prepped and draped in the usual sterile fashion. Ultrasound imaging of the left groin was performed demonstrating patency of the left common femoral artery. Images were saved to PACS.

Buffered 2% lidocaine was then infiltrated into the skin and subcutaneous tissues overlying the left common femoral artery. Under direct ultrasound visualization, antegrade access into the left common femoral artery was obtained using a micropuncture needle. Upon return of pulsatile blood, a microwire was passed through the needle into the superficial femoral artery and the needle was exchanged for a micropuncture sheath. The 0.018 wire and dilator were then removed and a torque wire was passed into the left superficial femoral artery and eventually placed with the tip in the popliteal artery. The side port of the sheath was then connected to heparinized saline flush.

Runoff angiogram of the left lower extremity was then performed in stations, demonstrating patency of the common femoral as well as the profunda femoral arteries. There was diffuse atherosclerotic disease involving the femoropopliteal arteries, with multilevel mild to moderate stenoses. The anterior tibial artery was patent proximally and at its midportion however, it terminated into collaterals within the distal calf with no dorsalis pedis identified. The tibioperoneal trunk was patent. There was a severe focal stenosis of the distal tibioperoneal trunk. The posterior tibial artery was diminutive but did supply inline flow to the left foot, with diminutive common plantar, lateral and medial plantar arteries demonstrated. The peroneal artery demonstrated multifocal proximal stenoses and terminated at the upper to mid calf. At this point, infusion of Angiomax was initiated.

After the angiograms were performed, a 5 mm x 10 cm Boston Scientific Charger balloon was then passed over the torque wire and positioned within the above-knee popliteal artery and distal superficial femoral artery. Prolonged angioplasty was then performed, and the balloon was pulled back over the wire. A post-angioplasty angiogram demonstrated significant improvement in the degree of luminal narrowing with minimal residual narrowing identified.The balloon and wire were then removed.

Combination of a Flex-T wire and 0.018 QuickCross catheter was then used to gain access into the posterior tibial artery. The QuickCross catheter was positioned with its tip at the mid calf level and an angiogram was performed, demonstrating multifocal stenoses of the posterior tibial artery, with inline flow to the right foot with diminutive common plantar, medial and lateral plantar arteries demonstrated. Post angioplasty of the entire posterior tibial artery using 2 mm x 10 cm balloons, there was significant luminal gain with improvement of inline flow to the foot and no significant residual stenoses identified.

The peroneal artery demonstrated multifocal proximal stenoses and terminated at the proximal to mid calf. Angioplasty was performed in the peroneal artery. Post recanalization and angioplasty, there was significant improvement in luminal gai n and flow within the peroneal artery.

IMPRESSION: Technically successful recanalization of the left posterior tibial and peroneal arteries with improved inline flow to the left foot.

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CPT Codes

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Procedure Codes:

- 37224 SFA/Popliteal Angioplasty
- 37228 Posterior Tibial Angioplasty
- 37232 Peroneal Angioplasty
- 75710-LT (59) Imaging Left Lower Extremity
- 76937 Ultrasound Guided Vascular Access
- 99152 Initial 15 minutes of moderate sedation
- 99153 x8 Each additional 15 minutes of moderate sedation
- Q9967 x53 LOCM 300-399 MG/ML
- J2250 Injection, midazolam hydrochloride, per 1 mg (Versed)
- J3010 Injection, fentanyl citrate, 0.1 mg

Diagnosis Codes:

- I70.222 Atherosclerosis of native arteries of extremities with rest pain, left leg
- M32.9 Systemic lupus erythematosus, unspecified
- Z94.0 Kidney transplant status

Comments:

- Ipsilateral angiogram of the left lower extremity was performed after accessing the left common femoral artery. (75710)
- Angioplasty was performed of the stenosis at the above knee popliteal/distal SFA (37224). Note that catheter placement is bundled.
- Angioplasty was performed of the stenosis at the posterior tibial (37228) and peroneal arteries (37232). Note that catheter placement is bundled.
- Documentation requirements met for ultrasound guidance for vascular access. (+76937)
- 2 hours and 15 minutes of moderate conscious sedation noted, billed in 15 minute increments. (99152, 99153)
- Drug amounts were not specified in the report to assign a quantity.
- *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:

- As a general rule, accessing the vessel, selective catheterization of the vessel and crossing of the lesion is bundled into the lower extremity revascularization codes. All catheter placements related to performance of the therapeutic intervention, including catheter placements for any diagnostic angiography associated with the therapeutic intervention should not be coded separately. (Note: There are some exceptions)

- An initial diagnostic angiogram may be reported when performed. If a prior diagnostic angiogram has been performed, diagnostic angiography should only be reported separately in accordance with guidelines established for reporting with transcatheter procedures.

- An initial diagnostic angiogram may be reported when performed. If a prior diagnostic angiogram has been performed, diagnostic angiography should only be reported separately in accordance with guidelines established for reporting with transcatheter procedures. Diagnostic angiography/venography performed during the same session as a therapeutic intervention may be reported separately when:

  - No prior catheter-based diagnostic angiography/venography study has been performed or if a prior study was performed but it is not available.

  - The prior diagnostic study is inadequate.

  - There has been a change in the patient's condition since the diagnostic study.

  - There is a clinical change during the procedure that requires further evaluation beyond the target area of the intervention.

  - Diagnostic angiography/venography performed at a separate setting from an interventional therapeutic procedure is separately reported.

Applicable Coding Guidelines (continued):

- **Femoral/Popliteal Territory.** The femoral/popliteal territory is made up of the common femoral, superficial femoral, deep femoral arteries and the popliteal artery.

    - The entire territory has been designated as one vessel for coding purposes, therefore only one code will be reported for multiple interventions for multiple vessels within this territory. There are no add-on codes for this territory.

- **Tibial/Peroneal Territory.** The tibial/peroneal territory is made up of the anterior tibial, posterior tibial, peroneal and tibioperoneal trunk arteries.

    - Each artery is considered a separate vessel for coding purposes.

    - Up to three codes may be reported for this territory – one primary code to describe the most extensive procedure, followed by up to two add on codes for two additional vessels.

    - When revascularization is performed of the tibioperoneal (TP) trunk in conjunction with either the posterior tibial or peroneal, the TP trunk is considered part of those vessels and the intervention on the TP trunk would not be coded separately.