Interventional Radiology Coding Case Studies

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Mesenteric Arteriogram & Thrombectomy/Thrombolysis

EXAM DESCRIPTION: Mesenteric arteriogram with thrombectomy/thrombolysis.

INDICATION: A 45-year-old female with acute thrombosis of the superior mesenteric artery, now 12 hours out since the start of symptoms.

PROCEDURAL STEPS:

1. Ultrasound-guided percutaneous access of the right common femoral artery.
2. Selective superior mesenteric arteriogram.
3. Transcatheter thrombectomy of the superior mesenteric artery.
4. Follow-up superior mesenteric arteriogram.
5. Transcatheter thrombolysis of the superior mesenteric artery.
6. Follow-up superior mesenteric arteriogram.

ANESTHESIA: Conscious sedation using Versed and fentanyl (see report); local anesthesia using buffered 1% Lidocaine.

TOTAL CONTRAST: Isovue 370, 77 mL.
TOTAL FLUOROSCOPIC TIME: 12.7 minutes.

TECHNIQUE: After informed consent was obtained, the patient was placed supine on the angiography table. The right groin was sterilely prepped and draped and locally anesthetized with 1% buffered Lidocaine. A small skin nick was then made.

Under ultrasound guidance, a micropuncture needle was advanced percutaneously into the right common femoral artery, and a 0.018-inch guidewire was passed proximally. Over this, a tract was serially dilated, followed by placement of a 5-French sheath. Over a guidewire, a 5-French RC1 catheter was passed and positioned with the tip in the origin of the superior mesenteric artery. This was followed by hand injection of contrast for a limited superior mesenteric arteriogram. The catheter and sheath were then exchanged over the wire for a 6-French Ansel sheath, which was positioned with the tip in the proximal superior mesenteric artery.

Over a guidewire, a 5-French angled glide catheter was passed across a proximal superior mesenteric arterial thrombus and subsequently injected, confirming short-segment thrombus of this vessel. Over the wire, a 6-French AngioJet catheter was passed. The AngioJet catheter was then advanced back and forth several times through the clot and the clot was subsequently removed.

Follow-up arteriogram was obtained, showing restoration of flow to the proximal SMA, including the proximal jejunal, middle and right colic branches. Filling of several ileal branches was noted as well. Transcatheter thrombolysis of the more distal aspect of the SMA was performed in what appeared to be the region of the ileocolic artery. Follow-up arteriogram was obtained, showing no significant improvement, however. At that point, the sheath was left in place with the tip positioned in the proximal SMA and was hooked up to a tPA drip. The patient was then sent to the floor for further care. She otherwise tolerated the procedure well with no immediate complications.

FINDINGS: The initial superior mesenteric arteriogram showed the proximal 4 to 5 cm segment patent, but with abrupt occlusion distally. Final images obtained show interval restoration of flow into the proximal SMA with reconstitution of flow seen into the middle and right colic arteries as well as various jejunal and ileal branches. A strong vascular bowel blush, however, is not demonstrated.

CONCLUSION: Abrupt occlusion of the proximal superior mesenteric artery due to intravascular thrombus. Status post technically successful transcatheter thrombectomy/thrombolysis with restoration of flow as described.

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CPT Codes

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Procedure Codes:

- 36245 Catheterization of the superior mesenteric artery (SMA)
- 75726(59) SMA Angiogram
- 37184 SMA Thrombectomy
- 37211(59) SMA Thrombolysis
- Q9967 x77 LOCM 300-399 MG/ML

Diagnosis Codes:

- K55.069 Thrombus SMA

Comments:

- Code 36245 is assigned for catheterization of the SMA, a first order vessel off of the aorta.
- Code 75726 is assigned for the SMA angiogram. Findings are noted in the impression.
- Code 37184 is assigned for the AngioJet thrombectomy.
- Code 37211 is assigned for thrombolysis that occurred following the thrombectomy procedure. Modifier -59 is needed, as thrombolysis is bundled with thrombectomy when it is part of the same procedure. A prolonged infusion was continued following the procedure.
- Code Q9967 is assigned for the LOCM administered.
- *Drugs and supplies are billed by the facility performing the procedure and should not be assigned for professional fee coding.*

Applicable Coding Rules:

Thrombectomy Coding Rules

Catheterization Codes

- When performing a thrombectomy the catheter must be manipulated through the arterial or venous system to perform the procedure. Catheterization codes should be assigned in accordance with the rules for reporting non-selective and selective catheterization unless otherwise bundled into the code for the thrombectomy procedure such as with intracranial thrombectomy (61645).

- Remember in the lower extremities, the external iliac and common femoral arteries are considered one vessel for coding purposes and in the upper extremities the subclavian and axillary arteries are also considered one vessel for coding purposes.

- It is important to note that the site of the thrombectomy alone is not the sole factor in determining catheterization selectivity. There may be instances when it is necessary to place the catheter beyond the vessel that is the site of a thrombectomy. Remember, catheter selectivity is based on the most distal catheter placement.

Diagnostic Angiography

- An initial diagnostic angiogram may be reported when performed with codes 37184-37188. 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. Note that diagnostic angiography is included with intracranial thrombectomy, 61645.

Arterial Thrombectomy Codes (37184-37186)

- Codes 37184-37186 describe arterial thrombectomy procedures. *(See code 61645 for intracranial arterial thrombectomy).*

Primary Thrombectomy

- Primary thrombectomy includes pretreatment planning and post procedure evaluation in addition to performance of the procedure.

Applicable Coding Rules (continued):

- Primary thrombectomy is reported with codes 37184 and +37185 and may precede or follow another intervention.
- If the original intent of the physician is to perform a thrombectomy, the procedure is reported as a primary thrombectomy. Typically, the diagnosis of thrombus has already been made.
- Most commonly primary mechanical thrombectomy will precede another percutaneous intervention with the decision regarding the need for other services not made until after mechanical thrombectomy has been performed.
- Code 37184 is reported for the initial vessel treated and code +37185 is reported for any subsequent vessels treated within the same vascular family.
- Code 37184 and +37185 are assigned when:
    - Thrombectomy is the only therapeutic intervention performed
    - Thrombectomy is performed and determination is made that other interventions must be performed.
- Continuous infusion therapy (37211-37214) may be reported in conjunction with thrombectomy codes.
- Do not report code 37184 in conjunction with 61645, 76000, 76001, 96374, 99151-99157.
- Do not report add-on code +37185 in conjunction with 61645 for intracranial thrombectomy.

Secondary Thrombectomy

- Secondary thrombectomy, commonly referred to as "rescue" thrombectomy is reported with code +37186.
    - Do not report with code 61645 for intracranial thrombectomy.
- If the original intent of the physician is to perform another peripheral intervention, the thrombectomy is reported as a secondary thrombectomy.

Applicable Coding Rules (continued):

- A secondary thrombectomy is performed to facilitate performance and/or completion of the planned interventional procedure.
- Code +37186 is assigned when:
  - Thrombectomy is performed to remove a small amount of clot present in a vessel that needs to be removed prior to another planned intervention.
  - Thrombectomy is performed to remove a thrombus or embolus that develops during another therapeutic intervention such as an angioplasty or stent placement.
  - For 2018, the NCCI Manual Chapter 5 added the following language:

    "*Thrombectomy of thrombus in the vascular territory of a diseased artery is inherent in the work of an atherectomy procedure. CPT code 37186 (Secondary percutaneous transluminal thrombectomy) shall not be reported for removal of such thrombus. For example, if a physician performs a lower extremity endovascular revascularization atherectomy, removal of any thrombus from the vascular territory of the vessel treated with atherectomy is not separately reportable.*"
- **Balloon Maceration of Clot.** Utilizing a balloon to facilitate removal of a thrombus is not coded separately. Treatment of an underlying stenosis must be documented to report angioplasty in conjunction with thrombectomy in the same vessel.
- **Single vs. Multiple Vessels.** Arterial thrombectomy codes 37184 and +37185 are assigned one time per vessel treated.
- **Multiple Lesions.** When there are multiple occlusions treated within the same vessel, only one thrombectomy code is reported for that vessel.
- **"Bridging" Lesions.** At times a "bridging lesion" may be encountered. This is a single lesion that spans two vessels. Only one thrombectomy code should be assigned in these instances.
- Administration of Heparin, Nitroglycerin, etc., during the procedure is not coded separately.

Applicable Coding Rules (continued):

RS&I Codes

- **Bundled Components.** All RS&I work is bundled into the surgical code for the thrombectomy procedure. This work includes the following services: contrast injections, angiography, roadmapping, and fluoroscopic guidance for the intervention, vessel measurement, and completion angiography.

Catheterization Codes

- When performing thrombolysis the catheter must be manipulated through the arterial or venous system to perform the procedure. Catheterization codes should be assigned in accordance with the rules for reporting non-selective and selective catheterization unless otherwise bundled into the code for the thrombolysis (ie, intracranial thrombolysis).

- Remember in the lower extremities, the external iliac and common femoral arteries are considered one vessel for coding purposes and in the upper extremities the subclavian and axillary arteries are also considered one vessel for coding purposes.

- It is important to note that the site of the thrombolysis alone is not the sole factor in determining catheterization selectivity. There may be instances when it is necessary to place the catheter beyond the vessel that is the site of a thrombolysis. Remember, catheter selectivity is based on the most distal catheter placement.

Diagnostic Angiography

- 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. Note that diagnostic angiography is included with intracranial thrombolysis, code 61645.

Applicable Coding Rules (continued):

Thrombolysis (37211-37214)

- Codes 37211 (arterial) and 37212 (venous) are assigned for the initial day of treatment.
- Modifier -50 is utilized to report bilateral thrombolysis.
- Code 37213 describes the continuation of an arterial or venous thrombolysis on a subsequent day.
- Code 37214 describes the final day of an arterial or venous thrombolysis procedure.
- When initiation and cessation occur on the same day of service, assign only the code for the initiation 37211 (arterial) or 37212 (venous).
- The following work is included with codes 37211-37214:
  - Follow-up arteriography/venography
  - Catheter position change and/or exchange
- Note that code *37195 Thrombolysis, cerebral by IV infusion* does not describe these transcatheter thrombolytic procedures. Code 37195 is assigned when a thrombolytic is administered by a nurse via IV access. This is typically performed in the Emergency Department.
- **Operative field.** Only one thrombolysis code should be reported for each operative field. An operative field refers to the area immediately surrounding and directly involved in a treatment/procedure. If multiple vessels in the same leg are treated, the code is reported only once. However, if bilateral lower extremity infusions are being performed, the thrombolysis code is reported for each side. To report bilateral thrombolysis through separate access sites, append modifier -50 to the appropriate thrombolysis code.
  - The following are considered one operative field: multiple vessels feeding a bladder tumor, multiple vessels in the same extremity, multiple vessels for endoleak, multiple hemodialysis side branches, bilateral uterine arteries.

Applicable Coding Rules (continued):

- The following are considered two or more operative fields: bilateral organs, bilateral arteriovenous malformations, bilateral testicular veins (varicocele), bilateral ovarian veins (pelvic congestion), intracranial aneurysms (two or more), multiple bleeds (spleen, pelvis)

- **Single vs. Multiple Vessels.** Thrombolysis codes are not assigned per vessel, rather they are assigned one time per operative field. Each extremity is its own operative field.

- **Multiple Occlusions.** When there are multiple occlusions treated within the same operative field only one thrombolysis code is reported for that operative field.

RS&I Codes

- **Bundled Components.** All RS&I work is bundled into the surgical code for the thrombolysis procedure. This work includes the following services: contrast injections, angiography/venography, roadmapping, and fluoroscopic guidance for the intervention, vessel measurement, completion angiography/venography and follow-up angiography.