

**Interventional Radiology Coding Case Studies**  
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**Week of February 5, 2018**

**Celiac Artery Angioplasty**

**INDICATION:** Patient with abdominal pain. The patient has CT demonstrating possible SMA occlusion with celiac artery stenosis. The inferior mesenteric artery is patent on CT.

**PROCEDURE**

1. Retrograde puncture of the left common femoral artery.
2. Catheterization of the abdominal aorta.
3. Abdominal aortogram.
4. Lateral abdominal aortogram.
5. Selective catheterization of the celiac artery.
6. Celiac artery arteriogram.
7. Selective catheterization of the splenic artery with arteriogram.
8. Balloon angioplasty of the origin of the celiac artery.
9. Repeat arteriogram.
10. IV conscious sedation.

Pre-procedure evaluation revealed the patient was an appropriate candidate for conscious sedation.

Vital signs, pulse oximetry, response to verbal commands were monitored and reported by the nurse in the medical record. All medications for conscious sedation including the doses administered were placed in the medical record. The patient returned to baseline neurologic and physiologic status prior to leaving the department. No immediate complications were noted. Informed written consent was obtained from the patient after discussion of the risks, benefits and alternatives to the procedure. The patient expressed full understanding and agreed to proceed forward.

The patient was placed supine on the angiography table. The left groin was prepped and draped in normal sterile fashion. Puncture was made of the left common femoral artery with a 21-gauge micropuncture needle after adequate anesthesia was obtained with local administration of buffered lidocaine. A 0.018 inch wire was advanced and a 4 French transition coaxial dilator was placed. A 0.035 inch wire was then inserted followed by insertion of a 5 French sheath.

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The pigtail catheter was advanced into the suprarenal abdominal aorta and an abdominal aortogram was obtained in an AP projection. Abdominal aortogram demonstrates aneurysmal dilatation of the inferior abdominal aorta with more tortuosity and ectasia of this vessel. Maximal dimension was approximately 4.5 cm. Irregularity of the proximal iliac arteries is identified with a focal 60% stenosis of the right common iliac artery. The renal arteries appear widely patent. The celiac artery is patent. There is filling of distal superior mesenteric artery branches. The inferior mesenteric artery opacifies with contrast agent, though the origin is not well defined on this view.

Next, a lateral aortogram was obtained in inspiration and expiration confirming superior mesenteric artery proximal occlusion. There is high-grade ostial stenosis of the celiac artery with likely an element of median arcuate ligament compression, though the degree of severe stenosis did not significantly change with inspiration and expiration. Next, attempted cannulation was performed of the celiac artery using a variety of catheters. Eventually catheterization was obtained with a guidewire and a Simmons 1 catheter. The Simmons 1 catheter was then advanced and a celiac artery arteriogram was then performed in AP projection, demonstrating classical celiac branch anatomy with a prominent arc of Buehler reconstituting an occluded superior mesenteric artery proximally. Distally, the superior mesenteric artery opacifies with contrast agent.

Next, a guidewire was advanced distally into the splenic artery followed by removal of the Simmons 1 catheter and advancement of a 5 French 60 cm slip catheter. The guidewire was removed and injection of contrast was performed within the slip catheter to obtain a splenic arteriogram which confirmed patency of this vessel without evidence of aneurysm or dissection. Next, the 0.035 inch Rosen wire was then inserted through the slip catheter and the slip catheter was removed. Next, the 5 French short sheath was removed and a 5 French Raabe sheath was inserted into the proximal celiac artery.

Over the 0.035 inch wire, 5-4 angioplasty balloon catheter was then deployed across the ostial stenosis and inflated to 10 atmospheres of pressure. The balloon obtained full inflation with resolution of the waist seen upon insufflation. The balloon catheter was removed and repeat injection of contrast was performed demonstrating significant residual stenosis at the site, though improved from the pre-angioplasty study. At this point the procedure was terminated. Sheath, catheters and wires were removed. Total fluoroscopy time was 26.9 minutes. The patient received a total of 99 mL Isovue 370. The patient received 400 mcg fentanyl IV and 3000 units heparin IV.

**CONCLUSION:** High-grade ostial stenosis of the celiac artery, likely exacerbated by component of median arcuate ligament syndrome. This underwent balloon angioplasty to 5-4 with significant residual stenosis at the angioplasty site, though improved from the pre-angioplasty arteriogram. Occlusion of the proximal superior mesenteric artery with reconstitution via prominent arc of Buehler from the celiac artery. The inferior mesenteric artery appears patent distally, though the origin is not well defined on this exam.

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# Interventional Radiology Coding Case Studies CPT Codes

**Week of February 5, 2018**

## **Celiac Artery Angioplasty**

### **Procedure Codes:**

- 36246 Selective catheterization splenic artery
- 75726 Selective celiac angiogram
- 75774 Selective splenic angiogram
- 37246 Celiac artery angioplasty
- Q9967 x99 LOCM 300-399 MG/ML
- J3010 x4 Injection, fentanyl citrate, 0.1 mg

### **Diagnosis Codes:**

- I77.4 Celiac artery compression syndrome (Celiac stenosis)
- K55.1 Chronic vascular disorders of intestine (SMA occlusion)

### **Comments:**

- Catheter was placed into the aorta, followed by the celiac artery and then the splenic artery (36246). Non-selective catheterization of the aorta is bundled as well as selective catheterization of the first order celiac artery. The most distal catheter placement within the vascular family was second order splenic artery. All lesser orders are bundled.
- An abdominal aortogram was performed, however, a non-selective abdominal aortogram is bundled when selective visceral imaging is performed. In this case a celiac angiogram (75726).
- The splenic artery was imaged following selective catheterization of the vessel. Code 75726 may only be assigned once per vascular family, therefore imaging of the splenic in the same family is assigned code +75774.
- Visceral angioplasty is reported with 37246 (celiac angioplasty).
- Moderate sedation is noted, but time not mentioned in the report.

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## **Applicable Coding Rules:**

### **Catheterization**

- The visceral vessels are below the diaphragm, therefore codes 36245-36248 are utilized to describe catheterizations of these vessels.
- Code for the highest order vessel selected, the most distal catheter placement, and always code selective catheterization over non-selective catheterization as non-selective catheterization codes are bundled with selective catheterization codes.

### **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. 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.
- Code 75625 is assigned for complete imaging of the abdominal aorta with mention of the renal artery and visceral artery origins.

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## **Applicable Coding Rules (continued):**

- ❖ When the catheter is advanced into any of the visceral arteries or renal arteries for additional imaging, code 75625 is no longer assigned. Flush aortogram is included with visceral angiography (75726) and renal angiography (36251-36254).
- Code 75726 describes selective imaging of the visceral vessels. Selective imaging requires the catheter to be in the vessel for the contrast injection.
  - ❖ Code 75726 is assigned one time per vascular family for the initial vessel selectively catheterized and imaged.
- Add on code +75774 is used for imaging of additional branches from an additional selective catheterization after the base imaging code has been assigned for a particular family.

## **Arterial Angioplasty**

- Angioplasty codes 37246-37247 describe an open or percutaneous angioplasty in the upper extremity arteries, visceral arteries and renal arteries. These codes are also used to report angioplasty in lower extremities for clinical indications other than occlusive disease.
  - ❖ Code 37246 is reported for the initial angioplasty in an artery.

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