Peripheral vascular disease (PVD) | ICD-10-CM

Clinical overview

Definitions
“Peripheral vascular disease” is a broad term that refers to diseases of the blood vessels outside the heart and brain. These diseases, over time, cause occlusion of the peripheral blood vessels by the following mechanisms:
- Inflammation: narrowing of blood vessels
- Atherosclerosis (fatty deposits): blockage of blood vessels
- Thrombus (clot) formation: blockage of blood vessels

Occlusion of the peripheral blood vessels results in restriction of blood flow.

Peripheral venous (vein) disease
The most common type of peripheral venous disease is deep vein thrombosis (DVT), or clot. See the separate DVT coding guidelines.

Peripheral arterial (artery) disease (PAD)
This guideline focuses on the most common type of peripheral vascular disease: peripheral arterial disease.
- PAD is most commonly caused by atherosclerosis or “hardening of the arteries.” This problem occurs when fatty material (plaque) builds up along the walls of the arteries (similar to coronary artery disease), causing narrowing of the arteries that reduces blood flow. In addition, the arterial walls become stiffer and cannot widen (dilate) properly, which also interferes with normal blood flow.
- People with PAD often also have coronary artery disease (CAD) and thus have a higher risk of heart attack or stroke. PAD mainly affects the arteries of the arms, legs, kidneys and stomach, but it usually begins in the legs.

Risk factors
- Atherosclerosis
- Diabetes mellitus
- Smoking
- Abnormal cholesterol levels
- Hyperlipidemia
- Heart disease
- High blood pressure/hypertension
- Obesity
- Older age
- Family history of PAD

Signs and symptoms (usually affect lower extremities)
- Most common symptom of PAD is intermittent claudication (pain or discomfort in the lower extremities and buttocks that occurs with exercise/activity and resolves with rest)
- Diminished pulses in legs or feet
- Decreased blood pressure in the affected limb(s)
- Arterial bruits (a whooshing sound heard with a stethoscope over the artery)
- Ulceration and sores with poor healing
- Hair loss on the legs and feet
- Discoloration of skin (bluish, dusky)
- Decreased warmth in the lower extremities

Diagnostic tools
- Medical history and physical exam
- Ankle-brachial index (ABI) test (compares blood pressures of the ankle and arm)
- Laboratory testing (e.g., blood testing for elevated cholesterol or diabetes)
- Ultrasound of the lower extremities
- Angiography of the arteries of the lower extremities

Complications
- Ulcers or open sores in or on legs and feet that can become infected and can lead to amputation
- Increased risk for heart attack and stroke

Treatment
- Smoking cessation
- Management of underlying conditions such as diabetes, high cholesterol and high blood pressure
- Diet management, exercise and weight control
- Medications (to prevent blood clots, to control pain if needed, to improve blood flow, etc.)
- Surgery (e.g., angioplasty)
Documentation tips for physicians

Abbreviations
- Limit – or avoid altogether – the use of acronyms and abbreviations. The abbreviation PVD is sometimes used to refer to peripheral vascular disease; however, PVD can have other meanings (e.g., posterior vitreous detachment, portal vein dilation). Further, in handwritten office notes, “PVD” is sometimes misinterpreted as “PUD” (e.g., peptic ulcer disease).
- The meaning of an abbreviation can often be determined based on context, but this is not always true.
- Further, “peripheral vascular disease” is a broad, nonspecific diagnosis.
- Best practice is to clearly spell out and fully describe the particular type of peripheral vascular disease that is present and all related manifestations.

Subjective
- In the subjective section of the medical record, document the presence or absence of any current symptoms related to peripheral vascular disease (e.g., pain, cold extremities, etc.).
- When intermittent claudication is present, clearly describe the patient’s particular symptoms.

Objective
- The objective section should document any current associated physical exam findings (diminished pulses, hair loss, skin discoloration, etc.) and related diagnostic testing results.

Final assessment/impression
- The final diagnostic statement should spell out in full and clearly describe the particular type of peripheral vascular disease condition that is present.
  - Document the site/location.
  - Specify the underlying causative condition and any related manifestations by using appropriate descriptors and/or linking terms such as “due to,” “secondary to,” “associated with,” “related to,” etc.
  - Example: “Atherosclerotic peripheral vascular disease of bilateral lower extremities with intermittent claudication”

Final assessment/impression – continued
- When documenting occlusive peripheral arterial disease, specify the cause of the occlusion.
- Do not describe current peripheral vascular disease as “history of.” In diagnosis coding, the phrase “history of” means the condition is historical and no longer exists as a current problem.
- Do not include a past peripheral vascular condition that has resolved as if it is current.
- Do not use terms that imply uncertainty (“probable,” “apparently,” “likely,” “consistent with,” etc.) to describe a current, confirmed peripheral vascular disease condition.
- Do not document suspected and unconfirmed peripheral vascular disease as if it were confirmed. Document signs and symptoms in the absence of a confirmed diagnosis.
- Include the current status of the peripheral vascular disease condition (stable, improved, worsening, etc.).

Plan
- Document a clear and specific treatment plan for the PVD condition, including orders for future diagnostic testing.
- Document to whom/where referrals or consultation requests are made.
- Include the date of the patient’s next appointment.

Electronic medical record (EMR) reminder
- Some electronic medical records insert ICD-10-CM code descriptions into the medical record to represent the final diagnosis, for example: “I73.89 Other specified peripheral vascular disease.”
- Remember that with these types of vague descriptions the diagnosis will not be complete unless the physician clearly documents the specific “other” PVD.
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ICD-10-CM tips and resources for coders

Coding basics

Many different descriptors further specify the particular types of peripheral vascular disease. For accurate and specific diagnosis code assignment, the coder must:

- a) Review the entire medical record to verify the PVD condition is current.
- b) Note the exact PVD description documented in the medical record; then, in accordance with ICD-10-CM official coding conventions and guidelines:
- c) Search the alphabetic index for that specific description.
- d) Verify the code in the tabular list, carefully following all instructional notes.

Coding PVD

- Vague diagnoses, such as “peripheral vascular disease” or “intermittent claudication” without further specification, should be clarified with the physician. However, when physician query is not possible and the medical record clearly supports a current diagnosis stated simply as “peripheral vascular disease,” the code that must be assigned is I73.9, peripheral vascular disease, unspecified. This code includes:
  - Intermittent claudication
  - Peripheral angiopathy not otherwise specified
  - Spasm of artery

Abbreviation PVD

A common coding error involves misinterpretation of the abbreviation PVD, especially in handwritten notes (for example, PUD for peptic ulcer disease can easily be misread as PVD). Further, the abbreviation PVD can have other meanings. Use caution when coding PVD – code I73.9 should not be assigned unless the individual medical record clearly shows PVD is being used to represent peripheral vascular disease.

Atherosclerosis of the native arteries of the extremities

Atherosclerosis of the native arteries of the extremities classifies to subcategory I70.2-. An additional code is used, if applicable, to identify chronic total occlusion of artery of extremity (I70.92).

Fifth characters in subcategory I70.2- specify the progression of the disease as follows:

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I70.20-</td>
<td>Unspecified atherosclerosis of native arteries of extremities</td>
</tr>
<tr>
<td>I70.21-</td>
<td>Atherosclerosis of native arteries of extremities with intermittent claudication</td>
</tr>
<tr>
<td>I70.22-</td>
<td>Atherosclerosis of native arteries of extremities with rest pain (includes any intermittent claudication)</td>
</tr>
<tr>
<td>I70.23-</td>
<td>Atherosclerosis of native arteries of extremities with ulceration (includes any rest pain and/or intermittent claudication)</td>
</tr>
<tr>
<td>I70.24-</td>
<td>Code L97.- is used with I70.23- and I70.24-, and code L98.49- is used with I70.25-, to identify the severity of the ulcer.</td>
</tr>
<tr>
<td>I70.25-</td>
<td>Atherosclerosis of native arteries of extremities with gangrene (includes any or all of the preceding conditions). I70.26- advises to use an additional code to identify the severity of any ulcer (L97.-, L98.49), if applicable.</td>
</tr>
</tbody>
</table>

As noted, these codes are listed in order of priority, and the codes are hierarchical, meaning the higher-level codes include the conditions of the lower-level codes. For example, if the patient has atherosclerosis of native arteries with ulceration and gangrene, only a code from subcategory I70.26- is assigned, as this code includes both gangrene and ulceration.
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ICD-10-CM tips and resources for coders

Atherosclerosis of extremities involving a graft

Atherosclerosis of extremities involving a graft codes to I7Ø.3- through I7Ø.7-, as follows:

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I7Ø.3-</td>
<td>Atherosclerosis of unspecified type of bypass graft(s) of the extremities</td>
</tr>
<tr>
<td>I7Ø.4-</td>
<td>Atherosclerosis of autologous vein bypass graft(s) of the extremities</td>
</tr>
<tr>
<td>I7Ø.5-</td>
<td>Atherosclerosis of nonautologous biological bypass graft(s) of the extremities</td>
</tr>
<tr>
<td>I7Ø.6-</td>
<td>Atherosclerosis of nonbiological bypass graft(s) of the extremities</td>
</tr>
<tr>
<td>I7Ø.7-</td>
<td>Atherosclerosis of other type of bypass graft(s) of the extremities</td>
</tr>
</tbody>
</table>

Codes from I7Ø.3- through I7Ø.7- provide additional characters to indicate the same progression of disease discussed above under subcategory I7Ø.2 – namely, intermittent claudication, rest pain, ulceration and gangrene.

- A chronic total occlusion of an artery of the extremities (I7Ø.92) develops when hard, calcified plaque accumulates in an artery over an extended period of time, resulting in a clinically significant decrease in blood flow. Approximately 40 percent of patients with peripheral vascular disease present initially with partial occlusion, which progresses to a chronic total occlusion. Intervention with angioplasty and stenting is more complex because passing a guide wire through a total occlusion is extremely difficult.

- Code I7Ø.92 is assigned as an additional code with subcategories I7Ø.3- through I7Ø.7- when a chronic total occlusion is present with atherosclerosis of the extremities.

Diabetic vascular disease

Peripheral vascular disease is a frequent complication of diabetes mellitus.

- Diabetic peripheral vascular disease without gangrene codes to EØ8 – E13 with .51.
- Diabetic peripheral vascular disease with gangrene codes to EØ8 – E13 with .52.
- Diabetes with other circulatory complications codes to EØ8 – E13 with .59.

Although atherosclerosis may occur earlier and more extensively in patients with diabetes, coronary artery disease, cardiomyopathy and cerebrovascular disease are not complications of diabetes and are not included in subcategories EØ8 – E13 with .5-.

- These conditions are coded separately unless the physician documents a causal relationship.

Further, the blood vessels of the heart and brain are not part of the peripheral circulatory system. Thus, when atherosclerotic heart or brain disease is linked in the record to diabetes mellitus as the cause, they are not coded as peripheral vascular diseases. Rather, these types of diabetic vascular complications are coded to EØ8 – E13 with .59.

References: American Hospital Association (AHA) Coding Clinic; American College of Cardiology; ICD-10-CM Official Guidelines for Coding and Reporting; ICD-10-CM and ICD-10-PCS Coding Handbook; Mayo Clinic; Medline Plus; WebMD