Peripheral Vascular Disease

Chronic Total Occlusion of the Peripheral Arteries

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Current Diagnosis Coding Schema

440 Atherosclerosis

The current schema provides no visibility of CTO conditions, i.e. native arteries of the extremities *with* CTO.
Peripheral Vascular Disease

Significant prevalence overlap with coronary heart disease, and high correlation with mortality

Lack of long term clinical outcomes data due to no diagnosis code

Particularly virulent in diabetics
About 40% of patients with PVD interventions have Chronic Total Occlusions*

*Site reference
CTO: What’s in the Lumen?
Chronic Total Occlusions

CTOs form when plaque accumulates in an artery, over months or years, resulting in clinically significant decrease in blood flow.
Chronic Total Occlusions

Arteries may form bypass collateral system in CTOs.

Collaterals may not fully compensate and may result in:

- Severe Ischemia
- Loss of Limb
Prevalence of CTOs

• CTOs of the Superficial Femoral Artery (SFA) occur in up to 50% of patients presenting with symptoms of peripheral arterial disease.

• These patients often have *coexistent* cardiac and cerebrovascular disease which increases the 5-year mortality rate by:
  – 50% in patients with intermittent claudication
  – 60%-70% in patients with Critical Limb Ischemia (CLI)

Current Treatment Options for Peripheral CTO

- Exercise
- Pharmacological
- Endovascular/Interventional (percutaneous)
- Surgical (open)
Femoropopliteal Angioplasty

Factors Influencing Success

- Presenting symptoms (claudication vs. limb threatening ischemia)
- Lesion length
- Occlusion vs. stenosis
- Status of run-off vessels
- Presence or absence of diabetes mellitus
Percutaneous Bypass
Morphological Stratification of FP Lesions

- TASC A
  - Single Stenosis < 3 cm

- TASC B
  - Single stenosis 3-10 cm not involving PA
  - Multiple lesions, each < 3 cm
  - Single or multiple lesions in the absence of continuous runoff to improve inflow for distal surgical bypass

Management of PAD-TransAtlantic Inter-Society Consensus (TASC) JVS 2000 31(1;2)
Morphological Stratification of FP Lesions

- TASC C
  - Single Stenosis or occlusion > 5 cm
- TASC D
  - Complete common femoral artery or SFA occlusions or complete and proximal trifurcation occlusions

Management of PAD-TransAtlantic Inter-Society Consensus (TASC) JVS 2000 31(1;2)
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<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>440</td>
<td>Atherosclerosis</td>
</tr>
<tr>
<td>440.0</td>
<td>Of aorta</td>
</tr>
<tr>
<td>440.1</td>
<td>Of renal</td>
</tr>
<tr>
<td>440.2</td>
<td>Atherosclerosis of native arteries of the extremities</td>
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<tr>
<td>440.20</td>
<td>– unspecified</td>
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<tr>
<td>440.21</td>
<td>- with intermittent claudication</td>
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<tr>
<td>440.22</td>
<td>– with rest pain</td>
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<tr>
<td>440.23</td>
<td>– with ulceration</td>
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<tr>
<td>440.24</td>
<td>– with gangrene</td>
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<tr>
<td>440.3</td>
<td>Of bypass graft of the extremities</td>
</tr>
<tr>
<td>440.8</td>
<td>Of other specified arteries</td>
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<tr>
<td>440.9</td>
<td>Generalized and unspecified atherosclerosis</td>
</tr>
</tbody>
</table>
440 Atherosclerosis

440.0 – Aorta
440.1 – Of renal artery
440.2 – Of native arteries of the extremities *with* chronic total occlusion
440.3 – Of native arteries of the extremities *without* chronic total occlusion
  440.30, unspecified
  440.31, intermittent claudication
  440.32, rest pain
  440.33, ulceration
  440.34, gangrene

440.4 - Of bypass graft of the extremities (was 440.3)
440.8 – Of other specified arteries
440 Atherosclerosis

440.0 – Aorta
440.1 – Of renal artery

440.2 – Of native arteries of the extremities without chronic total occlusion
   440.20, unspecified
   440.21, intermittent claudication
   440.22, rest pain
   440.23, ulceration
   440.24, gangrene

440.3 – Of native arteries of the extremities with chronic total occlusion

440.4 - Of bypass graft of the extremities (was 440.3)
440.8 – Of other specified arteries