

Collateral Arterial Pathways in Aortoiliac Occlusive Disease

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A 73-year-old man with a history of hypertension and diabetes presented with severe postprandial epigastric pain, without associated weight loss, that he had been experiencing for a week. He is an active 1 pack/day smoker. On exam, his abdomen was benign but his left femoral pulse was nonpalpable. Three-dimensional computed tomography angiography (CTA) revealed severe stenosis of the celiac and superior mesenteric (SMA) arteries and inferior mesenteric artery occlusion. He underwent successful SMA stenting with complete resolution of postprandial symptoms. CTA incidentally revealed a 4.1-cm abdominal aortic aneurysm and occluded left common iliac artery that was asymptomatic (Figure 1).

Aortoiliac occlusive disease (Leriche syndrome) is often seen in smokers and classically presents with nonpalpable

femoral pulses, impotence, and buttock/thigh claudication. However, it can be asymptomatic due to the development of rich systemic-to-systemic or mesenteric-to-systemic collateral arterial networks. The Winslow pathway reroutes blood to the pelvis and lower extremities via the subclavian to internal thoracic, superior epigastric, inferior epigastric, and external iliac arteries (Figure 1 A). Another important collateral pathway involves the lumbar or intercostal to deep circumflex iliac to external iliac arteries (Figure 1 B). Both pathways are well-developed in this patient (Figure 1 C, transverse view).

Keywords:

collateral arterial pathways, common iliac artery occlusion, peripheral arterial disease, aortoiliac occlusive disease

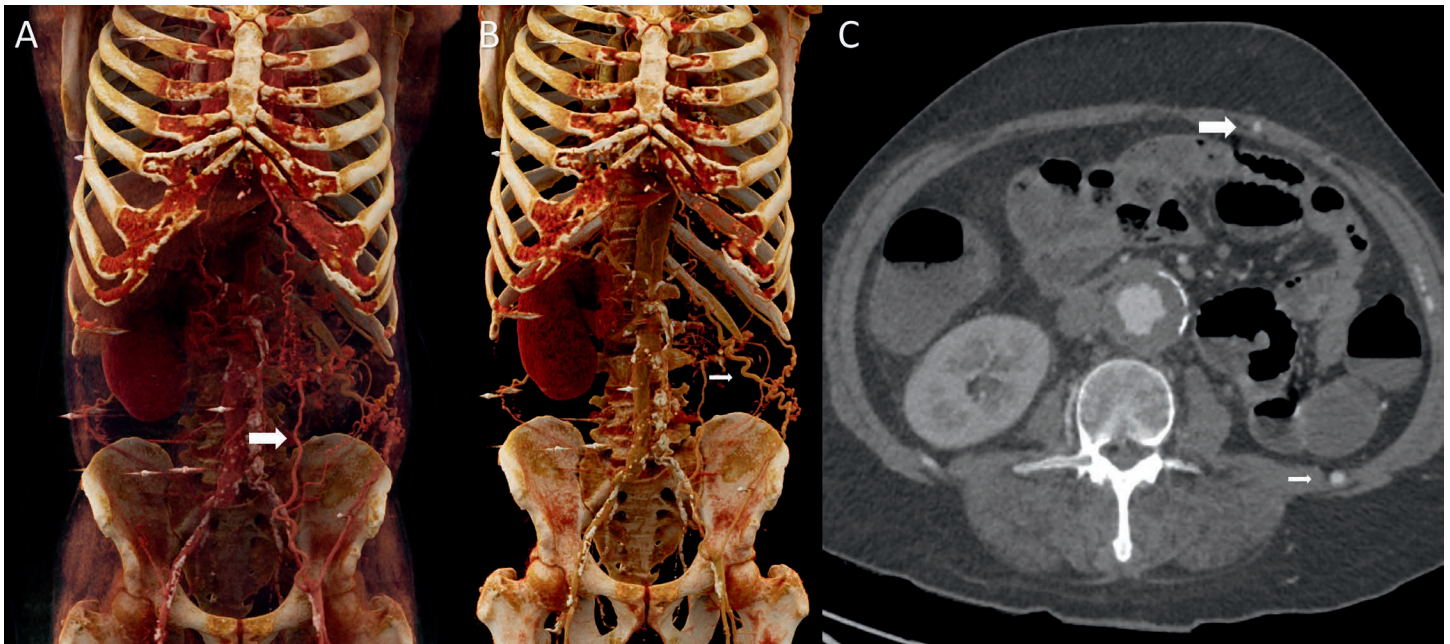


Figure 1.