

Peripheral Vascular Disease

Case Studies

A 52-year-old man complained of pain and cramping in his right calf caused by walking two blocks. The pain was relieved with cessation of activity. The pain had been increasing in frequency and intensity. Physical examination findings were essentially normal except for decreased hair on the right leg. The patient's popliteal, dorsalis pedis, and posterior tibial pulses were markedly decreased compared with those of his left leg.

| Studies | Results |
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| Routine laboratory work | Within normal limits (WNL) |
| Doppler ultrasound systolic pressures | Femoral: 130 mm Hg; popliteal: 90 mm Hg; posterior tibial: 88 mm Hg; dorsalis pedis: 88 mm Hg (normal: same as brachial systolic blood pressure) |
| Arterial plethysmography | Decreased amplitude of distal femoral, popliteal, dorsalis pedis, and posterior tibial pulse waves |
| Femoral arteriography of right leg | Obstruction of the femoral artery at the midhigh level |
| Arterial duplex scan | Apparent arterial obstruction in the superficial femoral artery |

Diagnostic Analysis

With the clinical picture of classic intermittent claudication, the noninvasive Doppler and plethysmographic arterial vascular study merely documented the presence and location of the arterial occlusion in the proximal femoral artery. Most vascular surgeons prefer arteriography to document the location of the vascular occlusion. The patient underwent a bypass from the proximal femoral artery to the popliteal artery. After surgery he was asymptomatic.

Critical Thinking Questions

1. What was the cause of this patient's pain and cramping?
2. Why was there decreased hair on the patient's right leg?
3. What would be the strategic physical assessments after surgery to determine the adequacy of the patient's circulation?
4. What would be the treatment of intermittent Claudication for non-occlusion?