Community-Based Collaborative Care: A Model for Realizing High Quality, Cost-Effective Outcomes

Coordinated care models can reduce the overall cost of care while improving clinical outcomes.

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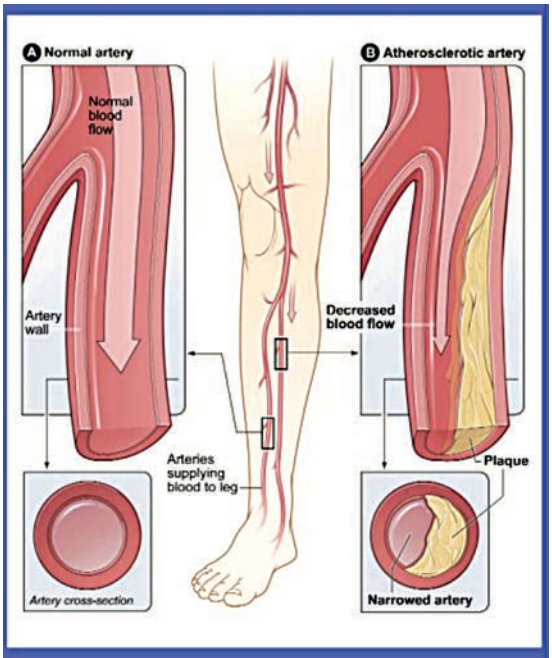
Overview

Peripheral Artery Disease (PAD) affects 8 to 12 million people in the US, including 20% of people over 65. This circulatory disease is caused by the narrowing or blockage of the vessels that carry blood from the heart to the legs, due to fatty plaque buildup called atherosclerosis (Figure 1). PAD is part of a global vascular problem highly correlated with obesity, diabetes, smoking, hypertension, cholesterol, and age. Men and women are equally impacted by PAD; however, black race/ethnicity is associated with an increased risk. People of Hispanic origin may have similar to slightly higher rates of PAD compared to non-Hispanic whites. Without proper treatment, 30% of those with PAD are likely to die from a stroke or heart attack withi five years.[1] Complicating the situation is that PAD awareness is estimated at 25%.[2]



The illustration shows a normal artery with normal blood flow (Figure A) and an artery containing plaque buildup (Figure B).

Figure 1

Opportunity

Community-based collaborative care, involving podiatric and primary care physicians, as well as vascular specialists, enables earlier disease detection, treatment and management, thereby

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New Concepts and Studies

"New Concepts" is a forum for the presentation of (1) new technologies and products which have been the subject of clinical study, and (2) new studies involving existing products. Readers should be aware that Podiatry Management does not specifically endorse any of the technologies, concepts, or products being discussed.

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improving clinical outcomes in a cost-effective manner.

Case Study

An 80-year-old male presenting with leg heaviness when walking was referred to a podiatric physician in metropolitan Philadelphia. Results from a Risk Assessment Questionnaire (Figure 2) confirmed he was a former smoker with a history of type 2 diabetes, hypercholesterolemia, and hypertension.

A PADnet study *(biomedix.com)* was performed and remotely interpreted by a vascular specialist from Vascular Access Centers who immediately returned to the podiatric physician his diagnosis of mild PAD in the right leg, as evidenced by the reduced ABI and dampened Pulse Volume Recording (PVR) waveforms (Figure 3).

The results were reviewed by the podiatric physician with the patient. Following the consultation, the patient elected to try 3 months of supervised exercise therapy and risk factor modification.

A subsequent PADnet study was performed approximately 3 months later and determined that the disease had not improved in the right leg and was now present in the left leg (Figure 4).

Name_____ Date_____

Do I Need a Test For PAD?

Peripheral Arterial Disease (PAD) is a serious circulatory problem in which the blood vessels that carry blood to your arms, legs, brain and kidneys, become narrowed or clogged. It affects over 8 million Americans, most over the age of 50. It may result in leg discomfort with walking, poor healing of leg sores/ulcers, difficult to control blood pressure, or symptoms of stroke. People with PAD are at significantly higher risk of stroke and heart attack. Answers to these questions will help determine if you are at risk for PAD and if a vascular exam will help us better assess your vascular health status.

Check All Applicable Boxes

1. Do you have foot, calf, buttock, hip or thigh discomfort (aching, fatigue, tingling, cramping or pain) when you walk which is relieved by rest? ☐
2. Do you have a history of cardiovascular disease or diabetes and experience any pain or swelling at rest in your lower legs or feet? ☐
3. Do you have a history of cardiovascular disease or diabetes and experience any leg, foot, or toe pain that often disturbs your sleep? ☐
4. Do you have an ulcer on your thigh, calf, ankle, foot or toe that is slow to heal? ☐
5. Do you have diabetes and unusual hair loss or skin discoloration in your legs? ☐
6. Do your fingers or toes feel numb or cold in response to temperature changes or stress? ☐
7. Have you suffered a severe injury to your leg(s) or feet? ☐
8. Do you have an infection of the leg(s) or feet that may be gangrenous (black skin tissue)? ☐

Other Comments or Notes: _____

Patient Signature: _____ Date: _____

Note: Providers are advised that insurance carriers have policies regarding when diagnostic services are considered medically necessary. These policies may vary between carriers and are subject to change at any time. Providers should check coverage requirements with specific insurance plans before testing.

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Figure 2

The right superficial femoral artery (SFA) demonstrated 30% distal SFA stenosis. The tibial peroneal trunk (TP Trunk) had a 99% stenosis so an atherectomy was performed. A subsequent angiogram demonstrated residual stenosis. Consequently, an angioplasty was performed on the TP Trunk with a 3x80 Percutaneous Transluminal Angioplasty (PTA) balloon.

The sheath was then pulled back into the left External Iliac Artery and a left leg arteriogram was performed and revealed that the SFA had 60% stenosis of the mid SFA. The popliteal was widely patent. The Anterior Tibial Artery had a stenosis of the proximal segment. A 6F Angio-Seal™ closure device was used at the puncture site and hemostasis was obtained. 70 ml of IA non-ionic contrast was used for the procedure.

Result

A post-intervention arteriogram demonstrated no significant residual stenosis in the TP Trunk.

Intravascular ultrasound (IVUS) was performed from the peroneal artery to the proximal SFA demonstrating no significant residual stenosis and confirming successful revascularization with atherectomy and adjunctive PTA (Figure 5).

A left SFA and Anterior Tibial Artery intervention is planned for the near future with 75mg of daily Plavix prescribed, along with continued control of vascular risk factors including diabetic shoes, compression, supervised exercise therapy, and a non-smoking lifestyle.

Without proper treatment,
30% of those with PAD are likely to die from a stroke or heart attack within five years.

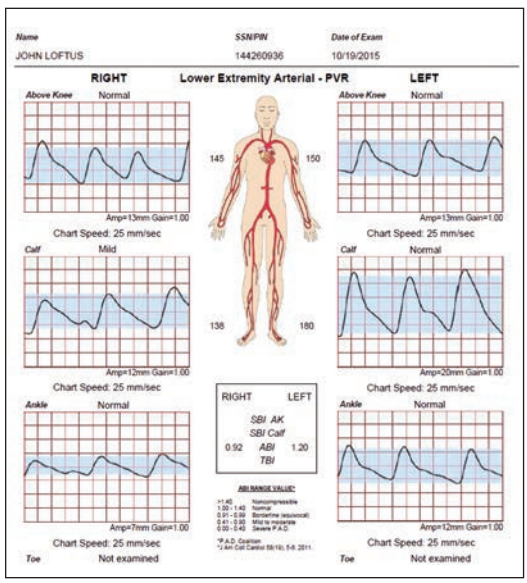

Figure 3

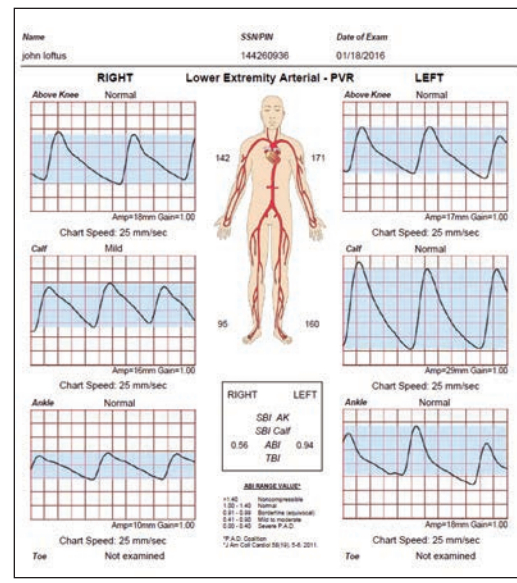

Figure 4

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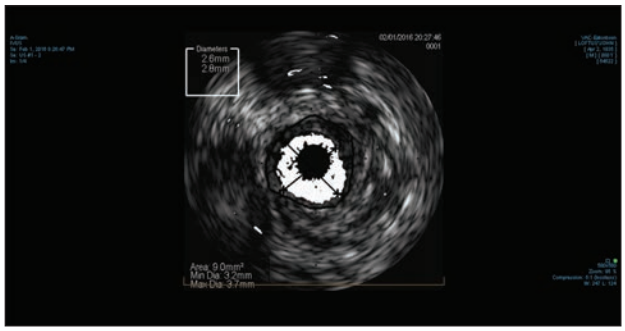

Figure 5

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alone, and is part of a global cardiovascular problem highly correlated to age, obesity, hypertension, cholesterol, smoking, and diabetes. A broad range of cost-effective treatment options are available, especially when PAD is diagnosed early in its progression, but low awareness and fragmented care have impeded effective care to date. Community-based collaborative care programs such as PADnet enable primary care and podiatric physicians to cost-effectively enable quality outcomes by combining the access and influence that they command, with the skill sets and resources of vascular specialists. Coordinated care models such as PADnet promise to reduce the overall cost of care while improving clinical outcomes, saving the limbs and lives of patients.

About VAC

Founded by Dr. James McGuckin, Vascular Access Centers (VAC) handle all aspects of vascular care with specialized focus on the continued function, preservation, and restoration of circulation as well as lower extremity vascular interventions. www.vascularaccesscenters.com

About PADnet

With over 3,000 systems sold nationally, PADnet by Biomedix diagnoses, treats, and manages patients with Peripheral Artery Disease (PAD) and Chronic Venous Insufficiency (CVI). http://www.surefitlab.com **PM**

References

[1] http://www.cdc.gov/dhdsp/data_statistics/fact_sheets/fs_pad.htm

[2] Peripheral Arterial Disease Detection, Awareness, and Treatment in Primary Care

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