

INTERVIEW

Premature Peripheral Artery Disease: Predisposition, Treatment, and Education

An Interview With Olamide Alabi, MD, RPVI

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finding different biomarkers or using genomics or proteomics transcriptomics to better define what is making this disease so aggressive in patients who are younger.

Given the earlier onset of the disease, how should treatment strategies for premature PAD differ from those for traditional presentations, especially in terms of pharmacological and surgical interventions?

I would say right now we treat premature PAD medically the same as traditional PAD. We also treat it surgically or endovascularly the same. In terms of revascularizations that we provide, we treat it the same. However, some data would suggest that in premature PAD patients with aortoiliac disease specifically, these individuals would benefit from open reconstruction as opposed to endovascular. An aorto-bifemoral bypass, for example, vs iliac stents, is one broad example.

There is also a little bit of data, and I would say this is a little bit more anecdotal because most of these are based on single-center studies, that indicate infrainguinal or below-the-groin disease or arterial disease in premature PAD patients might also be better suited with open reconstruction. I don't know that we know that one for sure, but what we do know is that what we see in these patients is a lot more aggressive. Now, we don't know everything about the risk factors just yet, but what I can say is about the milieu, if you will, of comorbidities in these patients is that they do differ a little bit from patients who are older adults with PAD. For example, the prevalence of diabetes is much, much higher in the premature PAD group. Similarly, dialysis dependence is also much, much higher in the premature PAD group.

So these things that we already know are bad for PAD: higher prevalence in those individuals. We know that these types of risk factors work individually and likely work synergistically together and just make outcomes really bad for these patients.

What roles do lifestyle modifications and early interventions play in managing premature PAD and how effective are they compared to more conventional treatment options?

At the 2024 VEITH Symposium, vascular surgeon Olamide Alabi, MD, RPVI, from Emory Healthcare in Atlanta, Georgia, presented a session called "Premature Peripheral Artery Disease: What Factors Predispose to It, How Should Its Treatment Differ, and How Does It Influence Treatment Outcomes?" *Vascular Disease Management* spoke with Dr Alabi about her presentation, the importance of early screening for peripheral artery disease (PAD), and the need for a "Get With the Guidelines" campaign.

What are the primary risk factors or underlying conditions that predispose individuals to develop premature PAD? How do they differ from those in older populations?

Largely, there are traditional risk factors that are found in individuals with premature PAD as well as older adults who have PAD--smoking, diabetes, chronic kidney disease, those who are dialysis dependent, etc. But there are more novel ones, or nontraditional ones. We do find these [risk factors] in older adults, but it seems that they are more either prevalent or aggressive in patients with premature PAD. These can include lipoprotein A and fatty acid binding protein. There are 2 single nucleotide polymorphisms that have been found to increase the risk for premature PAD as well. Many investigators are individually

Largely we do not know, and the reason is because a lot of our clinical effectiveness trials or device trials have largely excluded younger patients. We do not know how a lot of the treatments that we say are good for patients with PAD or patients with chronic limb-threatening ischemia vs patients with claudication, etc. are good for patients with premature PAD because when we say those things based on the literature, that literature is not usually looking at premature PAD patients. So we do not know exactly how these things work in those patients, number one. Number two, could lifestyle modifications work? Behavioral changes, lifestyle changes, etc? I am certain they can, but we have to find them early, right? We have to find the patients early. What we do know is that when patients present with PAD, there is a wide scope of manifestations that people can present with. They can be asymptomatic, with no symptoms at all. They could have relatively mild manifestations of disease such as claudication to end-stage PAD or chronic limb-threatening ischemia. What we do know is that patients with premature PAD are more likely to present with end-stage PAD as opposed to the earlier forms, which means we need to find them earlier. Now, it is hard to find them earlier. I am not trying to get political, but it is hard to find them earlier when we have statements from, say, the USPSTF that say PAD screening is not indicated because there is insufficient evidence.

I would say, given what we know about premature PAD and the abhorrently worse outcomes that these individuals have, given what we know about racial disparities, ethnic disparities, sex disparities in PAD, I think there is enough evidence.

How does the premature onset of PAD impact long-term treatment outcomes and prognosis, particularly with respect to limb salvage, cardiovascular events, and quality of life?

There have not been many studies as it relates to quality of life or health status in premature PAD patients specifically. What I can say about outcomes as they relate to mortality and major amputations, above-ankle amputations, is that when it comes to mortality, we looked at mortality in a data set that leveraged Medicare data linked with Vascular Quality Initiative procedural data. We looked at those data sets combined and individuals who underwent endovascular revascularizations for the limbs. Looking at patients who were under age 50 and those who were over age 50, we looked at those individuals' mortality at 30 days, 90 days, and 1 year after endovascular revascularization occurred, it was no different. When we looked at 30-day, 90-day, and 1-year amputation, however, it was a completely different story with markedly higher rates of amputation on the order of 4 times or more. This is a rate of about 5% major amputation in just 30 days. We don't see that in most populations. So obviously, there is something different about these patients and something we need to be clued in on in terms of how we can treat them. But again, I would say if we are thinking about how we can prevent an amputation in the person who comes in with end-stage PAD, we are already thinking too late. We really need to do more PAD awareness in our communities, PAD awareness with our primary care frontline providers and ER physicians, just get everybody on board.

I just came from the American Heart Association (AHA) meeting, and when you talk about PAD at the AHA, it is a very small component. Which is fine; they have space for it, but it is a very small space. When you are there, you hear all these different things that are going on in the main sessions, and the one that I love the most is "Get With the Guidelines". We have heart failure guidelines. We have coronary artery disease guidelines. We have spontaneous coronary artery dissection guidelines. We have all kinds of guidelines. We have guidelines when it relates to the heart, we have guidelines when it relates to strokes. We have guidelines when it relates to PAD, but PAD does not have a "Get With the Guidelines" campaign, and that is what we need. ■