Asymptomatic peripheral artery disease in South Indian women with type 2 diabetes

Sir,

Although it is well known that peripheral vascular disease is a common macrovascular complication in diabetes, the same is rather overlooked in women when compared with their male counterparts. Moreover, asymptomatic peripheral artery disease is also not well studied, both in men and women.

Asymptomatic Peripheral Arterial Disease (PAD) is defined as Ankle-Brachial Index (ABI)<0.9 in patients with no clinical evidence of PAD or foot ulcer.\(^1\) ABI<0.9 has 90% sensitivity and specificity.\(^2,3\) Low Ankle Brachial Index (ABI) is a predictor of future myocardial events, strokes, and amputations.\(^3,4\) Although prevalence of PAD is high in diabetics, no studies have looked into the presence of asymptomatic PAD in diabetic women from southern India.

We selected 100 type-2 diabetic women attending medical outpatient department in a rural tertiary care center (Sree Mookambika Institute of Medical Sciences, Kulasekharam, Tamil Nadu, India). Those with pre-existing PAD, with symptoms suggesting PAD-like claudication, with established coronary artery disease, and smokers or tobacco chewers were excluded. All patients were already on treatment with oral anti-diabetic drugs with fair control. Patients taking insulin regimes were excluded for uniformity.

Ankle Brachial Index (ABI) was measured using blood pressure apparatus and handheld Doppler equipment. Blood sugar and Hemoglobin A1c (HbA1c) were measured to assess diabetic control of the patients.

A total of 100 non-diabetic women attending general medical OP for other complaints were selected as control. Those with hypertension and metabolic syndrome were not excluded. Those with known coronary artery disease or cerebrovascular disease were not included in the control group. Those with peripheral vascular disease and symptoms suggesting PAD were excluded. Tobacco users were also excluded from the study.

All 100 patients were diabetics, with more than one-year history of detected type-2 diabetes mellitus. Of the 200 people for whom ABI was measured, 22 (11%) had values less than 0.9. The prevalence of low ABI was significantly higher in diabetics –19% vs 3%.

According to the data we collected, this is the first study to look into the association of asymptomatic PAD in diabetics without clinical cardiovascular disease or cerebrovascular disease in South Indian women. Most of the previous studies were done on symptomatic patients.

Classical risk factors are frequently associated with low ABI.\(^5\) A number of conditions associated with diabetes such as low High-Density Lipoprotein (HDL), high triglyceride, high Low-Density Lipoprotein (LDL), metabolic syndrome, and others, are associated with high incidence of low ABI and PAD.

Although ABI may establish the diagnosis of asymptomatic PAD, the guidelines for treatment of such patients is lacking. Hence, we believe that more studies need to be conducted in this field and criteria developed, in order to ensure screening and treatment of these patients.

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REFERENCES

1. Frowkes FG. The measurement of atherosclerotic peripheral arterial disease in epidemiological surveys. Int J Epidemiol 1988;17:248-54.
2. Lafoz C, Vicente I, Laguna F, García-Iglesias MF, Taboada M, Mostaza JM. Metabolic syndrome and asymptomatic peripheral artery disease in subjects over 60 years of age. Diabetes Care 2006;29:148-50.
3. Newman AB, Siscovick DS, Manolio TA, Polak J, Fried LP, Borhani NO, et al. Ankle-arm index as a marker of atherosclerosis in cardiovascular health study: CHS Collaborative research group. Circulation 1993;88:837-45.
4. Zheng ZJ, Sharrett AR, Chambless LE, Rosamond WD, Nieto FJ, Sheps DS, et al. Associations of ankle brachial index with clinical coronary heart disease, stroke and preclinical popletial and carotid atherosclerosis. ARIC study. Atherosclerosis 1997;131:115-25.
5. Peripheral arterial disease in people with diabetes. Consensus statement. American Diabetes Association. Diabetes Care 2003;26:3333-41.