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Unusual presentation of peripheral artery disease

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Abstract

Peripheral artery disease usually presents as intermittent claudication, with leg pain associated with walking and relieved by rest. We report a 52 year old man with pains in the left arm and peripheral vascular disease was confirmed with Doppler ultrasound. This presentation which is unusual in sub-Saharan Africa should be recognized.

Keywords: Unusual presentation, Peripheral artery disease

Case report

A 52 year old man presented with three week history of spasm-like pains in the left shoulder radiating to the left arm. The pains were more marked at rest. He was recently diagnosed hypertensive and placed on Amlodipine 10mg daily, Hydrochlorthiazide 25mg daily. He was not a known dyspeptic patient but a recent H. Pylori test was positive. Some spots in the left arm were tender, and movement of the joints did not elicit pain. His parents and a brother were all hypertensive.

His blood pressure was 120/90mmHg, pulse 96/minute. Fasting blood sugar was 103mg/dl, fasting low density lipoprotein was 81mg/dl, while total cholesterol was 161mg/dl. Findings on electrocardiography were left ventricular hypertrophy and left bundle branch block (Figure 1).

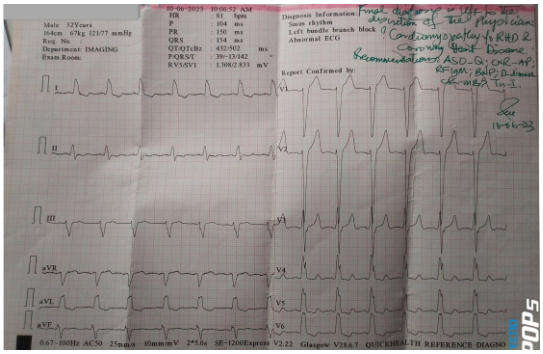

Figure 1: Left ventricular hypertrophy and bundle branch block

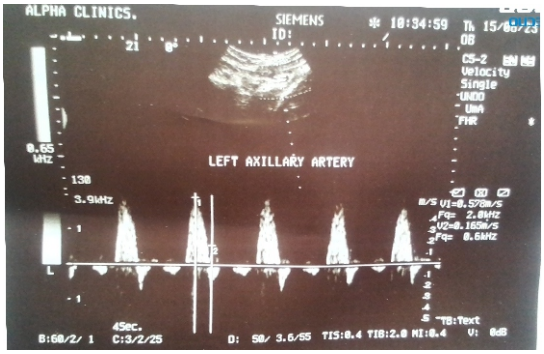

Figure 2: Echogenic deposits in axillary artery

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Two-dimensional electrocardiogram showed reduced contractility, ejection fraction 29.8%, Fractional shortening 14.3%, poor septal wall motion, dyssynchrony, dilated left ventricle diastolic dimension 6.1 cm, thickened anterior mitral valve leaflet with traces of calcification.

An impression of ischemic heart disease was made, and he was placed on Carvedilol 3.125mg twice

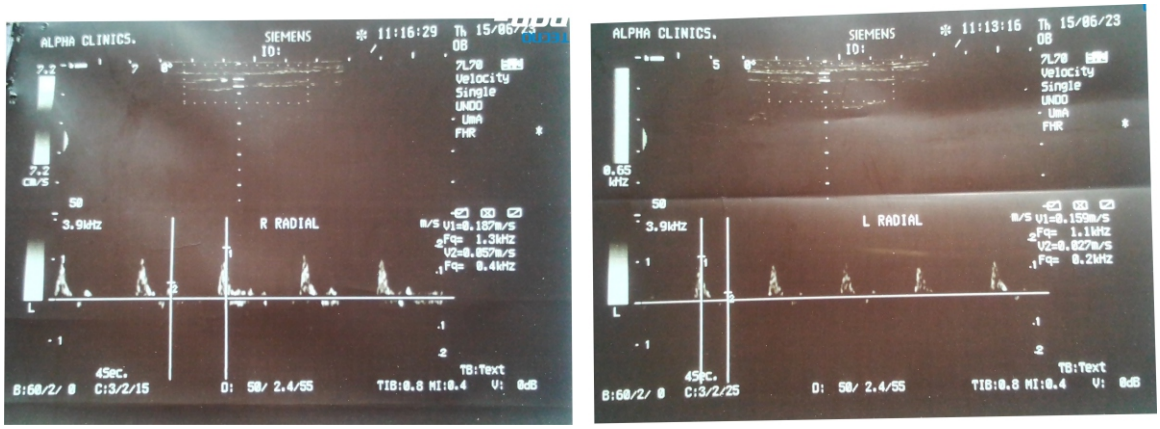

Figure 3: Reduced flow in the left radial artery

daily, losartan 50mg twice daily, digoxin 0.125mg daily, Aspirin 75mg daily, isosorbide dinitrate 10 mg three times a day, Frusemide 20 mg daily and Amlodipine 10mg daily.

Doppler scan showed echogenic deposits in left axillary (Figure 2) and brachial arteries, with increased intimal wall thickness, reversal of arterial waveform in brachial (antecubital) artery, reduced flow in left radial artery from atheromatous plaques (Figure 3). Erythrocyte sedimentation rate was 52mm/1 hour. An impression of peripheral vascular disease based on the atheromatous narrowing of the left forearm arteries and the spasm-like pain in the left fore-arm. Simvastatin 29mg nocte and Cilostazol 100mg bd were added. Angiography was requested but not obtained. Three months later, the patient relatives informed us he had a stroke, but attended another facility. He is currently undergoing physiotherapy.

Discussion

Studies of PAD in sub-Saharan Africa are limited.[1] However, the reported prevalence is significant. Johnston and colleagues[2] reported a prevalence rate in sub-Saharan Africa that ranged from 3.1% to 24% among adults 50 years and older and 39% to 52% of those with known risk factors such as diabetes. From Nigeria, several workers have reported[3-5] prevalence rates in Nigeria that varies from 25 to 40% in adults, especially in those with underlying risk factors.

The most characteristic symptom of PAD is claudication which is a pain in the lower extremity muscles brought on by walking and relieved with rest.[6] Upper extremity arterial disease is much less common. Lacking the classic presentation of intermittent claudication, it is under-diagnosed.[8] Our patient had left arm pains that were marked at rest. Though not usual, rest pain is a recognized presentation of peripheral artery disease.[9] It has been reported to suggest critical limb ischemia.[10]

In severe disease, the Doppler waveform flattens; in critical limb ischaemia it may be undetectable[11] but in our patient, the waveform was reduced in the left radial artery. Normal arteries demonstrate a characteristic sharp triphasic spectral pattern with mean peak systolic velocity of 105, 80 and 57cm/s for the subclavian, axillary and brachial arteries, respectively.[12] Peak systolic velocity was 57.8cm/s and 28.0cm/s for left axillary and left brachial arteries in our patient, the reduced values suggesting severe stenosis. Measurements however, were not made on the contra-lateral limb, representing an important limitation to our conclusions.

Reports of peripheral artery disease in upper extremity are rare. du Toit et al from south Africa reported 64 patients over a twelve year period, 10.9% ending with major amputation.[13] It is noteworthy that the patient subsequently had a stroke. Upper limb peripheral artery disease may predict increased risk of cerebro-vascular accident.

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