

which affects the amounts of oxygen and nutrients delivered to tissues at distal parts of the limbs. Patients present with pain at rest, followed by ischemic ulcers and tissue gangrene, eventually leading to necrosis of soft tissues and muscles of the extremities².

PAD now affects approximately 20% of adults older than 55 years with an estimated total prevalence of 27 million people in North America and Europe. The peak incidence is 60 new cases per 10,000 persons per year with a prevalence of 8 million people in the United States³.

The goal of managing PAD is to increase the distal blood flow. All patients with below knee PAD need aggressive risk factor modification including cessation of cigarette smoking, control of diabetes, hypertension, and hypercholesterolemia, along with dietary restrictions aimed at reducing low density lipoprotein cholesterol and obesity. In addition to risk factor modification, treatment options are geared towards medical therapy which includes antiplatelet agents like aspirin and clopidogrel, phosphodiesterase inhibitor like cilastazol, Direct-acting vasodilators like papaverine, calcium channel blockers like nifedipine and angiotensin converting enzyme inhibitors, exercise rehabilitation, surgical therapy like endovascular interventions, or surgical bypass. Our primary focus will be on conservative therapy aimed at reducing functional disability, improving clinical symptoms, and increasing walking distance⁴.

Materials and Methods:

We enrolled patient with below knee peripheral arterial disease who attended in outpatient department in Department of Vascular surgery, BSMMU from September 2020 to August 2021. They were recommended conservative treatment at their initial presentation.

We screened more than 500 patients from out outpatient department who came with the complaints of intermittent claudication, ischemic rest pain and gangrene. Of all these patients, patients with gangrene or had previous surgery or planned for ileo-femoral or femoro-popliteal surgery or endovascular intervention were excluded. Each patient was included only once.

Thus, we identified 47 patients with intermittent claudication, ischemic rest pain and gangrene. Conservative treatment included risk factor modification, lifestyle modification and drug therapy only, however supervised exercise programme was not performed.

We recorded the Fontaine stage⁵, walking distance (as reported by the patients), ankle brachial index (ABI) and arterial waveform of both limbs. Because patients were evaluated with serial non-invasive testing at our out-patients department, changes in the ABI and waveforms on pulse volume recordings (PVRs) were available for comparison with the symptomatic changes reported by the patients.

Intermittent claudication is a clinical syndrome characterized by reproducible leg pain brought on by exercise and relieved by rest. Diabetes mellitus was defined according to the criteria of the American Diabetes Association and was assumed to be present in patients with a history of diabetes taking anti-diabetic medication. Arterial hypertension was diagnosed in patients with resting blood pressure values above 140/90 mmHg and was assumed to be present in patients with a history of hypertension taking anti-hypertensive drugs.

Patients were followed by systematic chart review, and review of the original evaluation protocols. Routinely, patients were evaluated after 30 days with respect to clinical deterioration or improvement, including a physical examination and ABI and PVR measurements. However, patients were also advised to immediately attend the out-patient ward in case of worsening of the symptoms as indicated by reduced walking distance, rest pain or ulceration.

The endpoint was the occurrence of clinical improvement or worsening of conservatively treated patients with severe intermittent claudication during follow-up, and the identification of factors associated with these clinical changes. The course of the clinical stage (changes were defined by at least one stage in the Fontaine classification), ABI, maximum walking distance, occurrence of critical limb ischemia, limb loss or need for emergency revascularization were