Research Title: Prevalence and Clinical Characteristics of Peripheral Arterial Disease in Patients with Type 2 Diabetes in Mater Misericordiae Hospital, Nairobi.

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RESEARCH ABSTRACT

Introduction: Peripheral Artery Disease [PAD], when severe, is an important cause of morbidity and mortality globally and its incidence, linked to that of Type 2 Diabetes [T2DM], is rapidly rising. The prevalence of PAD in T2DM patients in Kenya is unknown and the clinical characteristics in this population have yet to be elucidated.

Objectives: The aim of this study is to screen patients with T2DM for PAD to determine the current prevalence of PAD among them and to analyze the clinical characteristics that may affect the prevalence of PAD in Kenya.

Methods: This hospital-based analytical cross-sectional study recruited 200 adult T2DM patients by stratified random sampling. These were screened for PAD using an ultrasound Ankle-Brachial Index (ABI) kit and their clinical characteristics were recorded including age, smoking status, education level, mode of health financing, comorbidity, medications, BMI, HbA1c, Lipid profile. These were analyzed by univariate and multivariate statistical models.

Results: In the study sample of 200 patients, the mean age was 58.8 years (SD = 12.4, range = 27.0–94.0), with a 50:50 gender distribution, and 18% incidence of smoking. **The prevalence of PAD was 18.5%** [n=37]: 13.0% had mild while 5.0% had moderate to severe PAD. PAD was more common in females 6.5% vs 12.0% (OR: 0.5; 95%CI: 0.2 – 1.0; p = 0.045), and those with HTN 13.5% vs 5.0%. The odds ratios were higher among uninsured patients 2.1 (95%CI: 1.0 – 4.3; p = 0.044), smokers 60.3 (95%CI: 21.4 – 169.5; p < 0.0001), those without tertiary education 2.8 (95%CI: 1.3 – 6.0; p = 0.007) and those with high total cholesterol levels (r= -0.314; p=0.0001) and high LDL cholesterol levels (r= -0.415; p<0.0001). Correlation with total duration of T2DM and that of HTN, BMI, HbA1c, EGFR and the classes of DM and HTN medication showed differences of little statistical significance.

Conclusion: PAD is common in patients with T2DM in Kenya. The majority of patients are relatively young, have mild PAD. For T2DM patients, integrating PAD screening and treatment to retard its progression while addressing the relatively modifiable factors associated with PAD such as health financing, control of HTN and dyslipidemia, will help reduce its burden.