ABSTRACT

BACKGROUND

Diabetes mellitus foot syndrome (DMFS) is defined as infection, ulceration, and or destruction of deep tissues associated with neurological abnormalities and various degrees of peripheral vascular disease in the lower limb. Diabetic foot problems are common throughout the world, resulting in major economic consequences for the patients, their families, and society. Diabetic foot ulcers are largely preventable, by identifying people at greatest risk of ulceration through careful clinical examination of the feet, education and frequent follow-up of these patients.

OBJECTIVES

The aim of this study was to determine the pattern of presentation of diabetes mellitus foot syndrome in persons with Type 2 DM (T2DM) attending University of Benin Teaching Hospital (UBTH). The prevalence of DMFS amongst persons with Type 2 DM attending UBTH was determined. The study also ascertained the risk factors associated with DMFS among these persons.

SUBJECTS, MATERIALS AND METHODS

A total of 380 persons were recruited for this study comprising 230 persons with DMFS and 150 persons without DMFS. Questionnaires were administered to the subjects to obtain socio-demographic and clinical information. Anthropometric measurements were taken, physical and neurological examination of both feet as well palpation of peripheral vessels and Ankle Brachial Pressure Index determination were also carried
out. Michigan Neuropathy Screening Instrument was used for symptom screening of neuropathy, while the Biothesiometer was used as the Gold standard for diagnosing diabetic peripheral neuropathy, against which other methods were compared.

RESULTS

The mean age of the subjects with DMFS and control were 56.31 years and 50.83 years respectively (p=0.01). Out of the 230 study subjects, 61% were females while 39% were males. The mean duration of DM for study subjects and controls were 6.5 years and 3.91 years (p=0.01), respectively while the mean BMI were 28.57 kg/m² and 28.89 kg/m² for study subjects and control respectively (p=0.37). With respect to metabolic control, the mean Fasting Plasma Glucose (FPG) for subjects with DMFS and controls were 124.92 mg/dl and 119.30 mg/dl respectively (P=0.03). The prevalence of DMFS in this study was 38.7%. Peripheral neuropathy was the most prevalent risk factor present in 57.8% of subjects with DMFS, followed by calluses (42.6%). Peripheral Vascular Disease was identified in 32%. The independent risk factors of DMFS in this study were duration of DM, peripheral neuropathy, foot deformity, callus, and retinopathy.

CONCLUSION

The prevalence of DMFS amongst persons with Type 2 DM in Benin City appears to be high which are in keeping with increasing global trends of DM. Identification of patients at risk for foot ulceration and subsequent risk factor modification (where possible) and patient education are recommended for reducing the burden of DMFS in Nigeria.