

Clinical predictors of imminent diabetic foot ulcer among diabetes mellitus patients attending diabetic clinics in Dar es Salaam and Zanzibar 2023

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ABSTRACT

Background: Diabetic foot ulcer is a chronic, often serious, and potentially disabling complication that arises in individuals with diabetes mellitus. It is a wound or an open sore that typically forms on the foot, particularly on the soles or sides of the feet. DFUs tend to develop due to a combination of factors associated with diabetes; hyperglycemia, presence of calluses, foot deformities, peripheral neuropathy, and poor circulation, which can impair the ability of the foot to heal. The management of diabetic foot ulcers requires a multidisciplinary approach. Hence, detection of the clinical predictors of imminent diabetic foot ulcer and timely interventions are the only soaring approaches that are less costly and more effective.

Broad objective: to determine the distribution of clinical predictors of imminent diabetic foot ulcer among diabetes mellitus patients attending diabetic clinics in Dar es Salaam and Zanzibar.

Methods: This is a descriptive cross-sectional study conducted among diabetes mellitus patients attending diabetic clinics in Dar es Salaam and Zanzibar. Questionnaires were used to collect demographic data and clinical characteristics of the study participants. Random blood glucose and skin scrape tests were done using standard methods.

Results: A total of 202 participants (72 males and 130 females) were studied. Out of the 202 study participants, the proportion of diabetic foot ulcers was 40.6%, with the clinical predictors of imminent diabetic foot ulcer; peripheral neuropathy (47%), calluses (43.1%), hyperglycemia (34.2%) foot deformities (20.8%) and peripheral vasculopathy (10.4%).

Conclusion: The presence of clinical predictors of imminent DFU in diabetes mellitus patients can lead to the development of DFU with negative irreversible consequences such as LLA. Hence, identifying these clinical predictors of imminent DFU enables the prevention of the development of DFU and its complications. The presence of clinical predictors of imminent DFU such as; hyperglycemia, poor foot care practices, peripheral neuropathy, peripheral vasculopathy, calluses, and the presence of foot deformities can contribute to DFU if no preventive strategies are undertaken.

Recommendations: Healthcare providers are strongly advised to pay close attention to the clinical indicators signaling imminent DFU in patients with diabetes mellitus. It is essential to continue implementing preventive measures for high-risk foot; good glycemic control including adherence to medication as well as lifestyle changes, daily foot examinations by the patients, proper footwear, and reporting any foot changes to the clinic.