The Prevalence and Associated Risk Factors of Candida Sp. Infections in Foot Ulcers in Patients with Type 2 Diabetes Mellitus: Single Centered Study

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Diabetes Mellitus, characterized by elevated blood sugar levels, frequently leads to complications such as foot ulcers exacerbated by poor glycemic control and Candida infections. This cross – sectional study, conducted with ethical clearance from the Faculty of Allied Health Sciences, University of Peradeniya, aimed to investigate the prevalence and risk factors of Candida spp. infections in foot ulcers among patients with type 2 diabetes mellitus. The study enrolled 107 diabetes foot ulcer (DFU) patients after obtaining written consent at Teaching Hospital Peradeniya. Exclusions included recent antifungal therapy and participants under 18 years old. Swab samples, collected from all patients, underwent Candida sp. identification tests, using gram staining, sabouroud dextrose agar, rice plate culture, germ tube testing, and Candida Chrom Agar. Sociodemographic and risk factor data were collected via structured interviewer-administered questionnaires following a pilot study to validate questionnaires. Descriptive analysis using IBM SPSS Statistics version 25 and Fisher's Exact Test were employed for statistical evaluation. DFU patients, with a mean age of 61.00 years, were 63.6% male and 36.4% female. In the chose participated, 10.3% exhibited Candida sp. prevalence. Most samples (61.7%) showed no Candida growth, while 28.0% displayed non-Candida growth. Among significant Candida growth cases, 5.6% were C. albicans, 0.9% C. glabrata, 1.9% C. tropicalis, 0.9% C. krusei, and 0.9% C. auris. Significant associations were found between Candida prevalence and tobacco smoking, fasting blood sugar level, foot ulcer duration, and footwear practices. No significant associations were observed with gender, education, income, dietary choice, alcohol consumption, duration of DM, medication use, and wound dressing. Our study identified notable links between Candida spp. growth and footwear habits, tobacco usage, uncontrolled diabetes, and foot ulcer duration. Underrated fungal infections lasting over the month demand regular culture testing in DFU patients to optimize treatment. Further investigation is essential to evaluate the integration of fungal culture and antifungal therapies**.**

Keyword: Diabetes Mellitus, Diabetic Foot Ulcer, Swab Sample, *Candida* Spp.