

A retrospective study of the microbiology of diabetic foot infections at a community hospital in Bermuda

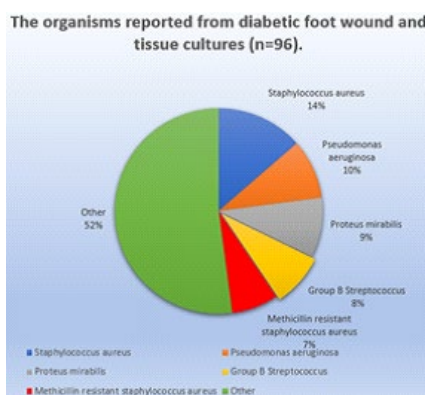
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There is a high prevalence of type 2 diabetes mellitus in Bermuda. It has been well established that a significant number of patients with diabetes mellitus will develop a diabetic foot infection (DFI), which is associated with increased morbidity and mortality. The objectives of this study were to determine the microbiological and antimicrobial susceptibility profile in DFIs and to investigate whether methicillin resistant *Staphylococcus aureus* (MRSA) is a common pathogen as well as if it plays a pivotal role in amputations. A retrospective study was carried out on 96 patients diagnosed with DFI. Demographic data, types of cultures, antimicrobial susceptibility profile and antimicrobial management were collected from medical records. Of the ninety-six patients investigated, *Staphylococcus aureus* was the most common organism isolated, followed by *Pseudomonas aeruginosa*, Group B *Streptococcus* and *Proteus mirabilis*. In addition, MRSA was also isolated at a low frequency. The organisms isolated showed susceptibility to commonly used antimicrobial agents such as amoxicillin/clavulanate, clindamycin, cefazolin, ampicillin/sulbactam, tetracycline, ceftriaxone, trimethoprim-sulfamethoxazole and piperacillin/tazobactam. There was an association between peripheral vascular disease (PVD) and diabetes related amputations. In conclusion, *Staphylococcus aureus* is a common organism in DFI and the findings of the study does not support empirical MRSA antimicrobial therapy for the management of DFI. There was no evidence to suggest that there is an association between MRSA and diabetes related amputations.

Keywords: Diabetes Foot Infection, Amputation, *Staphylococcus aureus*, Methicillin Resistant *Staphylococcus aureus*.



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Biography

Donna Kaye Bennett BSc.; MBBS; DM, is a graduate of The University of the West Indies' (Mona) Jamaica Internal Medicine programme. She has worked as a Locum internist at The Cheshire Hall Medical Centre in Providenciales, Turks and Caicos Islands and as Head, Department of Medicine at the Savanna-la-mar Public General Hospital in Westmoreland, Jamaica West Indies. She is currently employed at The King Edward VII Memorial Hospital, Bermuda for the past seven years, where she works as a Hospitalist. Her graduate research project, The Prevalence of *Mycoplasma pneumoniae* in an Urban Hospital (2012) was published by University of the West Indies.