

Analysing Practice for Prosthetic Restoration among Major Lower Limb Amputees with Diabetes: From Northern Borneo Perspective

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ABSTRACT

Introduction: Diabetes is high in the agenda of public health issues with significant prevalence of diabetic-related amputations. Prosthetic restoration post-amputation is imperative to reduce disability, but its success is influenced by several factors. This study analysed the practice, and the determining factors affecting prosthetic restoration among major lower limb amputees with diabetes in Sabah. **Methods:** Retrospective cross-sectional study among 65 major lower limb amputees with diabetes referred for rehabilitation medicine services at Queen Elizabeth Hospital from 1st January 2015 to 31st December 2017. Demographics data, pre-morbid diseases, levels of amputation and practice on prosthetic restoration (suitability for restoration, duration from prosthetic application to restoration, funding issue) are primary evaluated factors. **Results:** Forty-nine, fifteen and one amputees had below knee amputation, above knee amputation and hip disarticulation respectively. Forty-three amputees (66.2%) were deemed suitable for prosthetic restoration but only 27 were prosthetically restored, with mean duration from prosthetic application to restoration of 5.92 ± 2.189 months. Having additional pre-morbid diseases did not reduced the likelihood of suitability for prosthetic restoration compared to those only with diabetes ($p=0.082$). Funding issue is the key factor affecting prosthetic restoration with higher likelihood for restoration among those eligible through governmental agencies funding ($p=0.027$). **Conclusion:** In Sabah, low rate of suitability for prosthetic restoration is observed among major lower limb amputees with diabetes. A larger study is warranted to investigate causes of such low rate of suitability for prosthetic restoration among this specific population in the effort to reduce public health burden from major lower limb amputation-related disability.

Keywords: Lower limb amputations, Amputee rehabilitation, Prosthetic restoration, Diabetes-related amputations