



Service Priorities and Programmes
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Two-staged Admission Pathway for Transtibial Amputation to shorten hospital length of stay in TKOH: A Pilot Study

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Introduction

Transtibial amputation and subsequent prosthesis fitting can cause prolonged hospital length of stay (LOS) and rehabilitation that greatly increases hospital operational cost. The traditional pathway to treat new amputees under care by Hospital Authority usually involves in same episode of admission which usually takes months to remain as inpatient until the first prosthesis is fitted.

Recently, Department of Orthopaedics & Traumatology and Prosthetic & Orthotic Department of Tseung Kwan O Hospital (TKOH) had introduced a 2-staged admission pathway for new transtibial amputees in order to shorten hospital LOS as well as to achieve similar level of treatment outcomes. The 2-staged admission pathway includes: 1. discharging amputee once medically fit and independent in walking with aid, 2. on-going monitoring of discharged amputee and prosthetic fitting in outpatient clinics, and 3. readmission for prosthetic training.

Objectives

The aim of this study is to compare the difference of LOS between the traditional pathway and the 2-staged admission pathway of new transtibial amputation.

Methodology

A retrospective cohort study was done from March 2014 to September 2017 in TKOH. Ten new unilateral transtibial amputees (5 male and 5 female) with the mean age of 55.7 ± 9.3 were recruited. Subjects were divided into two groups: first prosthetic fitting within same episode of admission versus first prosthetic fitting in two admissions. Independent t-test was performed to compare the difference of LOS between the two groups. P value of < 0.05 was considered statistically significant.

Result

The mean LOS upon first discharge was significantly reduced ($p < 0.05$) in 2-staged admission by 55.8 days when compared with same admission. The mean total hospital LOS including first prosthesis training was also significantly reduced ($p < 0.05$) by 46.2 days.

Concerning treatment outcomes, although K level after one month of use of prosthesis was similar in the two groups, more patients in 2-staged admission were able to walk without aid and perform daily walking for more than 2 hour. Moreover, complication of sore within three months was less frequent in 2-staged admission.