



Service Priorities and Programmes

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Accelerated Physiotherapy Protocol for Total Knee Replacement is Safe and Reduces Hospital Length of Stay

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Introduction

The third Total Joint Replacement Center (TJRC) of the Hospital Authority was established in Pok Oi Hospital since 1 September 2014. To satisfy the rising number of patients requiring surgery and anticipate further development of the TJRC, a pilot Fast Track Program for Total Knee Replacement (TKR) was established in May 2016. This program was aiming at identifying suitable patients to undergo an intensive post-operative rehabilitation program thus allowing them to integrate into community earlier.

With reference of the local and overseas physiotherapy experience for patients with TKR, a new accelerated physiotherapy protocol was developed to facilitate patient's rehabilitation journey so as to reduce the length of stay in the hospital.

Objectives

A pilot study to evaluate the effectiveness and safety of the accelerated physiotherapy protocol for the total knee replacement.

Methodology

From 1 May 2016 onwards, suitable patients who would undergo the primary TKR surgery will be recruited into the program by multidisciplinary screening. Inclusion criteria were aged below 70, physically and mentally fit with generally good past health, with good social support and suitable home environment; and patient's psychologically ready for the intensive rehabilitation.

Pre-operatively, accelerated physiotherapy protocol would be introduced to patients for psychological readiness and pre-rehabilitation exercises were instructed.

On post-operation day 0, the physiotherapist would assess the patients and start actively and passively mobilize the knee joints as well as weight bearing exercises (eg. Standing, stepping, or walking) during the physiotherapy session. Intensive physical training would be continued during hospitalization.

Result

From 1 May to 10 January 2017, 22 patients were recruited. The mean age was 61.09 ± 4.97 and male to female ratio was 63.6% to 36.4%.

All patients could start weight bearing exercises on post-operation day 0. No adverse effect was reported. All patients could achieve a functional knee range of 0 to 90 degree and ambulate independently with any walking aids upon discharge to home. The average length of stay (ALOS) was 4.73 ± 2.69 days. Comparing with the general primary TKR cases in TJRC in 2016, the ALOS was significantly reduced by 49.0% (ALOS = 9.44 days achieved from CDARS).

Early mobilization and ambulation by physiotherapists plays an important role in promoting faster return of physical function, preventing undesired complications and minimizing decondition during hospitalization. Patients also felt satisfactory about early regain of physical independence and shorter period of hospitalization. In conclusion, the accelerated physiotherapy protocol for TKR is safe and effective in patient's regaining functional independency and shortens the length of stay which helps the Hospital in alleviating the increasing demand of total knee replacement and the medical costs of the health care system.