Use of Robot Assisted Gait Training (RAGT) – Lokomat to enhance walking rehabilitation in neurological patients.
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Keywords:
Robot Assisted Gait Training (RAGT)
walking rehabilitation
neurological patients

Introduction
Use of Robot Assisted Gait Training (RAGT) – Lokomat to enhance walking rehabilitation in neurological patients. Wong S Y, Chan C N, Fung C W. (Physiotherapy Department, KWH) Introduction: Restoration of walking is one of the prime goals in neurological rehabilitation. One of the emerging tools - Robot Assisted Gait Training (RAGT) devices is gaining popularity in the neurological rehabilitation arena. Use of RAGT - Lokomat had been commenced since July 2013 in Kwong Wah Hospital to enhance walking rehabilitation in neurological patients.

Objectives
This study aims to investigate the effectiveness of RAGT together with conventional physiotherapy in promoting walking ability and performance in neurological patients.

Methodology
A pre- and post-test design was adopted. All the subjects were neurological patients from KWH or other hospitals. Outcome measures used for evaluating walking ability was Modified Functional Ambulatory Category (MFAC) and for evaluating walking performance were 10 Meters Walk Test (10MWT), Time Up and Go Test (TUGT) and 6 Minutes Walk Test (6MWT) respectively.

Result
From July 2013 to November 2014, there were totally 26 patients treated with RAGT with an average of 16.9 hours attendance per patient. Average age of the patients was 50.7 (21 to 83) with twelve female and fourteen male. There was significant improvement in walking ability measured by MFAC (sig: 0.00 with Wilcoxon Signed Rank Test (z=-3.78, n=22)). 69.23% of patients were non-ambulatory (MFAC category 1 or 2) at the beginning of treatment whereas only 15.38 % of patients remained
non-ambulatory at the final assessment. Thus, 53.85 % of patients had their ambulatory status upgraded from non-ambulatory to at least basic walker. Among these patients, 5 of them achieved ambulatory status of at least supervised walker so that walking performance could be evaluated. General improving trend towards the walking performance outcomes had been illustrated. However, these changes did not reach statistical significance due to the small sample size.