



Service Priorities and Programmes
Electronic Presentations

Convention ID: 160

Submitting author: Ms Yau Shan Shirley CHONG

Post title: Physiotherapist I, Queen Elizabeth Hospital, KCC

Impact of Transcatheter Aortic Valve Implantation on Functional Exercise Capacity

Chong SYS, Tsui AYY, Yu DTW, Lee SKW, Lau PMY

Physiotherapy Department, Queen Elizabeth Hospital

Keywords:

TAVI

Exercise Capacity

Transcatheter Aortic Valve Implantation

Functional Capacity

Introduction

The prevalence of aortic stenosis (AS) is 3-9% in elderly over 80 years. The life expectancy of severe symptomatic patients is only 2-3 years if remain untreated. Aortic Valve Replacement (AVR) is the most effective treatment which requires an open heart procedure to replace the diseased aortic valve with an artificial valve. Unfortunately, 30% of patients, especially those elderly with comorbidities, are of high risk for the open heart procedure. Transcatheter Aortic Valve Implantation (TAVI) is a new and minimally invasive, percutaneous approach for those patients unfit for AVR. It has been started in Queen Elizabeth Hospital since December 2010. As it is a newly developed intervention, it is worthwhile to evaluate the pre- and post- operative functional improvement for patients after TAVI.

Objectives

The study was to assess the functional exercise capacity after TAVI in patients with severe AS.

Methodology

This was a retrospective study. Data from patients who received TAVI from December 2010 to December 2012 was retrieved and analyzed. Patients' functional exercise capacity was assessed by 6-minute walking test (6MWT) before the operation, post-operatively before discharge from hospital, 1st month, 3rd month, 6th month and 1-year post-operatively. Repeated measures ANOVA was used to evaluate the changes between different time points.

Result

There were 19 patients undergone TAVI. The success rate was 100%. However, one patient died in the 2nd month after the operation due to sudden cardiac arrest. Another patient was excluded as he lived in mainland after the surgery. Therefore, complete data set was obtained from 17 patients. There were 8 females, 9 males with mean age of 81.5 ± 4.2 years old. The exercise capacity at the pre-operatively stage was 237.1m (2.13METs). The exercise capacity showed continuous improvement

from the 1st month post-operatively (209.4m, 2.25METs) up to 1-year (268.1m, 2.27METs) and achieved the most significant improvement (25.4%) at 6th month post-operatively (297.4m, 2.42METs, $p<0.01$). Conclusion: TAVI provides a new hope for the severe AS patients who were unfit for open heart procedure. It improves their functional exercise capacity and physical activities which enhances their quality of life. However, larger sample size with longer follow up period warrants further study to evaluate the functional outcomes and its long term effects.