



**Service Priorities and Programmes**  
**Electronic Presentations**

**Convention ID:** 258

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**Health-Related Quality of Life after Transcatheter Aortic Valve Implantation (TAVI) in High-Risk Patients with Severe Aortic Stenosis**

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**Keywords:**

Aortic stenosis

TAVI

**Introduction**

Aortic stenosis (AS) is the most prevalent native valve disease in the elderly. Symptomatic AS will cause serious disability, restrictions in daily living and high mortality. Surgical aortic valve replacement (AVR) is regarded as gold standard for symptomatic severe AS. However, AVR is often declined for old age or high -risk patients because of underlying co-morbidities. With the advancement of technology, an alternative therapeutic option- TAVI is currently available. TAVI seems to be an effective procedure with high success and improved mortality rate. Nevertheless, better Quality of Life (QoL) is a major expectation by this group of patients. Other than the success rate and mortality figures, QoL is crucial to assess the efficacy of this novel procedure. In Hong Kong, Queen Elizabeth Hospital is the first hospital to perform TAVI. Since December 2010, 22 patients were recruited to our TAVI program.

**Objectives**

To evaluate the QoL of patients after TAVI

**Methodology**

From December 2010 to February 2013, 22 patients have undergone TAVI in QEH. All of them were declined for AVR. The SF-12, ejection fraction (EF), New York Heart Association (NYHA) functional class, 6-minute walk test and 30-days mortality were measured at 1 and 6 months after TAVI.

**Result**

Results: 22 patients with mean age 82 (SD 5.01), 9 female and 13 male were recruited. The mean logistic Euro Score (15.6 +/- 11.21) and mean gradient across the aortic valve (53.03 +/- 10.46) were high. All of them were old age patients with high surgical risk that not fit for surgical valvular replacement. The in-patient and 30 days mortality was 0 %. One patient was admitted for mild right retinal artery occlusion with full recover after 4 days hospitalization. EF ( $p < 0.05$ ) and 6- minute walk test ( $P < 0.00$ ) were significantly improved. Similar results were shown in New York Heart Association (NYHA) functional class, 77% improved 1 class, 14% with 2

classes and 9 % with no change. The quality of life using the most extensively validated generic health status tool, SF-12 also show profound results in both the Mental component ( $p < 0.038$ ), and the Physical component ( $p < 0.002$ ). Conclusions: QoL is the major concern for this group of high risk, old age patients. TAVI has shown promising results in improving the quality of life and functional capacity. With more accumulating data in the future, TAVI might prove to be a more viable and appropriate treatment modality for this group of high-risk patients.