Transcatheter Aortic Valve-in-Valve Implantation For Failed Surgical Bioprosthetic Valves. A Minimalist Approach Without Contrast Aortography or Echocardiographic Guidance

N. Htn1, A. Attinger-Toller2, D. Murdoch4, G. Perlman 4, A. Alenezi 4, J. Crowhurst1, P. Blanke4, J. Leipsic 4, D. Wood4, J. Webb4

1 Alfred Hospital, Melbourne, Australia
2 Peninsula Health, Frankston, Australia
3 Monash University, Melbourne, Australia
4 St Paul’s Hospital, Vancouver, Canada

Abstracts

Objectives: To demonstrate safety, feasibility and short-term clinical outcomes after transcatheter aortic valve-in-valve (ViV) implantation under local anaesthesia without contrast aortography or echocardiographic guidance.

Background: Transcatheter ViV implantation is an emerging treatment modality for patients with degenerative surgical bioprostheses. Given the radiopaque properties of the surgical aortic valve (SAV) frame, ViV procedures can often be performed with fluoroscopic guidance alone.

Methods: ViV implantation was performed in 37 patients with SAV failure under local anaesthesia without contrast aortography. Clinical and echocardiographic data were obtained at baseline, discharge, and 30 days.

Results: Mean age was 74±10 years and STS predicted risk of mortality was 5.6±2.4%. Mean transaortic gradient decreased from 39.4±15.5 mmHg to 13±6.3 mmHg at discharge (p<0.001), and 20±7.5 mmHg at 30 days (p<0.001 compared to baseline), aortic valve area increased from 0.9±0.3 cm² to 1.2±0.4 cm² at 30 days (p=0.07). No patient had more than mild aortic regurgitation. Hospital discharge occurred at a median of 2.6±4.4 days. At 30-day follow-up there were no deaths, myocardial infarctions, strokes, repeat hospital admissions for heart failure, or renal failure. 1 patient (2.7%) required a new pacemaker. 93% of patients were in New York Heart Association functional class I or II.

Conclusions: Transcatheter aortic ViV implantation for selected patients with degenerative surgical bioprostheses under local anaesthesia without aortography or echocardiographic guidance is feasible and safe.

http://dx.doi.org/10.1016/j.hlc.2019.06.704

Trends in Pre-hospital Notification (PHN) in ST Segment Elevation Myocardial Infarction (STEMI) and Clinical Outcomes - Longitudinal Study

M. Savage1,2, D. Murdoch1, J. Crowhurst1,2, C. Raffel1,2

1 The Prince Charles Hospital, Brisbane, Australia
2 University of Queensland, Brisbane, Australia

Introduction: Globally, there has been a significant reduction in door to balloon (DTB) times over time with varying reported impact on clinical outcomes in STEMI patients. Pre-hospital notification (PHN) and initiation of treatment by ambulance officers in the field has previously been shown to improve DTB times yet there is limited data in the Australian context with regard to clinical outcomes.

Method: Analysis of 1211 consecutive STEMI patients over a 10-year period between 2008 – 2017 from prospectively collected data from the Prince Charles Hospital STEMI database was performed. Comparison of performance markers including DTB times and clinical endpoints of 30-day mortality and 1-year mortality were examined.

Results: The proportion of STEMI patients receiving PHN and initiation of treatment of STEMI has increased from 19.6% in 2008 to 66.9% in 2017 (p<0.001). Median DTB time was significantly improved with PHN (35mins vs 71mins; p<0.0001). Achievement of DTB<60mins and DTB<90mins targets were also both significantly improved with PHN (DTB<60mins 90.9% vs 33.7%; p<0.0001 and DTB<90mins 99.3% vs 73.7%; p<0.0001). Both 30 day and 1-year mortality were significantly improved with PHN (2.05% vs 5.42%; p=0.0024 and 2.4% vs 7.50%; p<0.0001 respectively).

Conclusion: Pre-hospital notification and initiation of treatment of STEMI by ambulance officers in the field significantly improves both STEMI performance markers and 30-day and 1-year mortality. Further examination of factors surrounding PHN utilization is warranted.

http://dx.doi.org/10.1016/j.hlc.2019.06.705

Ultrasonic Assessment of Subclinical Radial Artery Stenosis After Transradial Angiography

P. Nguyen1,2, A. Makris1,3, A. Hennessey1,2, K. Park2, V. Chen4, S. Jayanti1, C. Juergens2

1 Campbelltown Hospital, Campbelltown, Australia
2 Liverpool Hospital, Liverpool, Australia
3 Western Sydney University, Campbelltown, Australia
4 UNSW, Liverpool, Australia

Background: This pilot study aims to investigate for subclinical endothelial injury following transradial coronary