

The Vancouver 3M (Multidisciplinary, Multimodality, But Minimalist) Clinical Pathway Facilitates Safe Next-Day Discharge Home at Low-, Medium-, and High-Volume Transfemoral Transcatheter Aortic Valve Replacement Centers: The 3M TAVR Study

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Objectives

To prospectively determine the safety and efficacy of next-day discharge using the Vancouver 3M (Multidisciplinary, Multimodality, but Minimalist) Clinical Pathway.

Study design

Prospective, multicenter sequential case series.

Materials and methods

- To be eligible, patients had to have severe symptomatic aortic valve stenosis and considered to be at increased surgical risk
- Baseline characteristic, outcomes and complications were reported according to the European Association of Echocardiography/American Society of Echocardiography recommendations
- No specific hemodynamic criteria were used to determine severe aortic valve stenosis in the patients: this was done at each clinician's discretion
- If life expectancy was >3 years, then patients could be enrolled in the study

Key results

- 411 patients were enrolled at 13 centres: 58% received a SAPIEN XT valve and 42% received a SAPIEN 3 valve
- The median age of patients was 84 years
- Median procedure time was 45 min
- Next-day discharge home was achieved in 80% of patients and within 48h in 90%

Limitations of study

- A core lab was not used for either echocardiographic or computed tomography angiography screening or outcome analysis
- Clinical and haemodynamic outcomes were self-reported by the individual sites
- Considerable heterogeneity in patient enrolment due to competing trials in 2 of the 3 large-volume centres was observed
- Potential risk of selection bias: several patients were excluded from the study and may reflect early experience from many centres with a minimalist clinical pathway for TAVR
- Inclusion and exclusion criteria were minimal and would be generalisable to most patient populations undergoing TAVR
- Multicenter sequential case series and not a randomised controlled trial

Conclusions

In those patients who undergo contemporary balloon-expandable transfemoral TAVR at low-, medium- and high-volume centres, adherence to the Vancouver 3M Clinical Pathway allows next-day discharge home with excellent safety and efficacy outcomes.