

30-day Valve in Valve Transcatheter Aortic Valve Implantation outcomes, from ACE-TAVI registry

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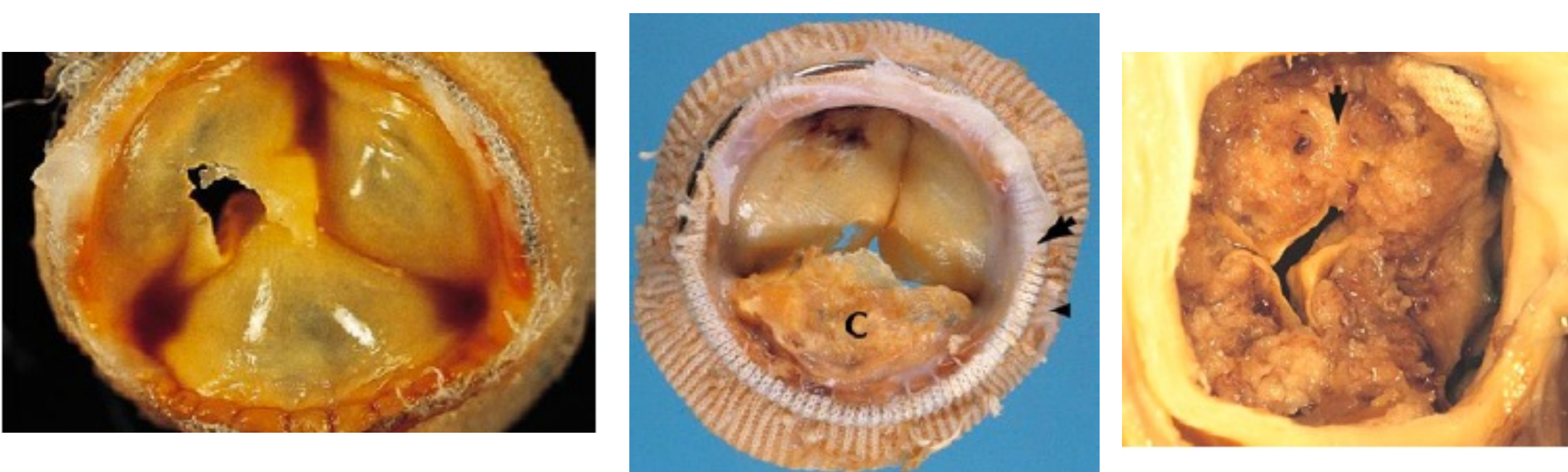
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Background:

There is an increasing number of surgical and transcatheter bioprosthetic valve implantations which after a few years eventually fail See Figure. Registry data from overseas have shown safety and efficacy of valve in valve (VIV) transcatheter aortic valve implantation (TAVI) but Australian VIV TAVI data is scarce.

Results:

143 patients underwent VIV TAVI. The average age was 79 ± 9 years, comprising of 72% males with average STS score of 6 ± 4 . The rate of surgical bioprosthetic valves was 134 (94%) and TAVI bioprosthetic valves was 9 (6%). Types of bioprosthetic failure was stenotic in 83 (58%), regurgitation in 34 (24%) and mixed in 26 (18%). Post valve implantation the mean gradient was 18 ± 8 mmHg and more than mild paravalvular leak was found in only 2 (1.3%). At 30 days, the frequency of all bleeding was 13 (9%), all vascular complications 12 (8%) and stroke 1 (0.6%). Heart failure hospital admission occurred in 2 patients (1.3%) and overall mortality in 3 patients (2%).



A. Wear and tear

B. Calcification

C. Thrombus



D. Pannus



E. Endocarditis

Figure: Most common causes of bioprosthetic valve failure. A.Wear and tear B. Calcification C. Thrombus D. Pannus E. Endocarditis

Table: Valve in valve 30 day clinical outcome

Variable	
All bleeding	13 (9%)
All vascular complications	12 (8%)
Stroke	1 (0.6%)
Heart failure admission	2 (1.3%)
All mortality	3 (2%)

Methods:

We analysed data from ACE-TAVI registry, a prospective TAVI registry that includes 3 major hospitals in Melbourne, Victoria. All patients who underwent VIV TAVI from 2008 to 2022 were included.

Conclusion:

Data from a large Australian multicentre registry shows that similar to overseas, VIV TAVI is a safe procedure with excellent outcomes and favourable survival at 30 days.