TRANSCATHETER AORTIC VALVE REPLACEMENT (TAVR) IN ARGENTINA: META-ANALYSIS OF REAL-LIFE DATA

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Rationale: severe aortic stenosis (SAoS) is a degenerative valvular disease. Clinical outcomes of SAoS include heart failure, syncope and death. For many years the main treatment available was surgical valve replacement (SVR). During the last decade it has been possible to replace tha valve implanting a device percutaneously. TAVR is a validated technology for patients with severe symptomatic aortic stenosis that has been available in Argentina since 2009.
Published reports in indexed medical journals about the clinical outcomes of this procedure in a real-life setting in Argentina are scarce. Besides, real-life results could be modified by non-clinical determinants, such as health system funding, geographic location, number of beds, residence programs or university affiliation.
Objective: the aim of our study is to know the clinical outcomes of this technology in a real-life setting in Argentina.
Methods: : a systematic review of published papers and abstracts (presented in regional and national scientific sessions) of unicentric TAVR cohorts from Argentina between 2008 to 2018 was conducted. Two independent researcher teams extract data, discrepancies were solved by consensus. All outcomes were assessed during hospitalization and at 30 days. We ran random effects models by means of R package "meta" (Schwarzer, 2007), estimating heterogeneity with Cochrane's Q and I2 statistics.
Results: Twelve cohorts pooling 774 patients were included in the meta-analysis. The most frequently implanted device was CoreValve. Procedure success was 97% (95CI 91.25%-99%; I2 0%) as reported by the authors. In-hospital complications were: moderate or severe aortic regurgitation 21.1% (95CI 12.6%-33.2%; I2 54.5%), mortality 6.1% (95CI 4.3%-8.5%; I2 0%), stroke 4.5% (95CI 2.5%-7.8%; I2 0%), permanent pacemaker implantation 20.9% (95CI 13.2%-31.8%; I2 79.2%). At 30 days mortality was 9.7% (95CI 6.9%-13.4%; I2 22.7%). Meta-regression with center-level variables revealed that 30-day mortality was higher in public funded hospitals but was not related to geographic location, number of beds, residence programs or university affiliation.

TABLE I - Cohorts characteristics

Outcome	Reported Rate Min, Max, %	Cohorts (n)	I², %	Cochran's Q	p Value Heterogeneity	Pooled Estimate Rate, %	95% CI
In-hospital / procedure outcomes							
Device success (lato sensu)	95,8-100,0	5	0,0	0,32	0.99	97,1	91.3-99,1
Aortic regurgitation	4,2-31	5	54,5	8,79	0,067	21.1	12,6-33,2
Mortality	3,5-14,3	7	0,0	5,8	0,44	6,1	4,3-8,5
Stroke	0,0-8,3	4	0,0	1,1	0,77	4,5	2.5-7,8
Permanent pacemaker implant	0,0-43	9	79,2	38,38	<0,0001	21,0	13,2-31,8
Cardiac tamponade	0,0-4,4	6	0,0	0,43	0,99	4,0	2,4-6,4
30-day outcomes							
Mortality	5,6-25	8	22,7	9,05	0,25	9,7	6,9-13,4

TABLE II – In-hospital & 30-day Clinical Outcomes

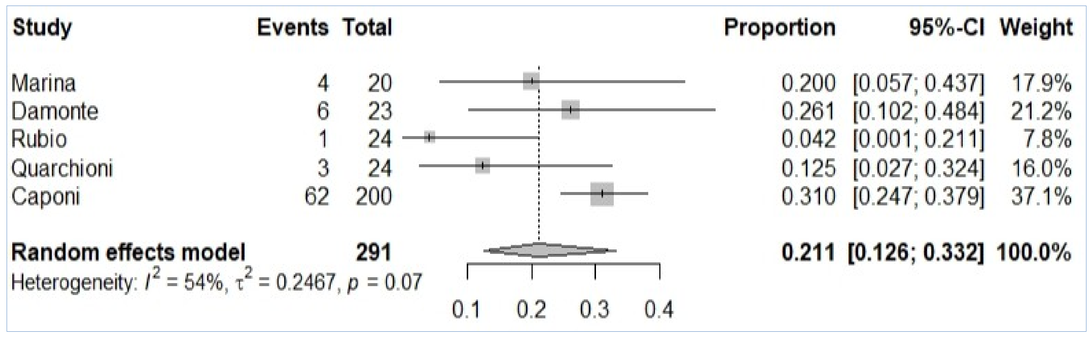

FIGURE I - ***moderate or severe aortic regurgitation***

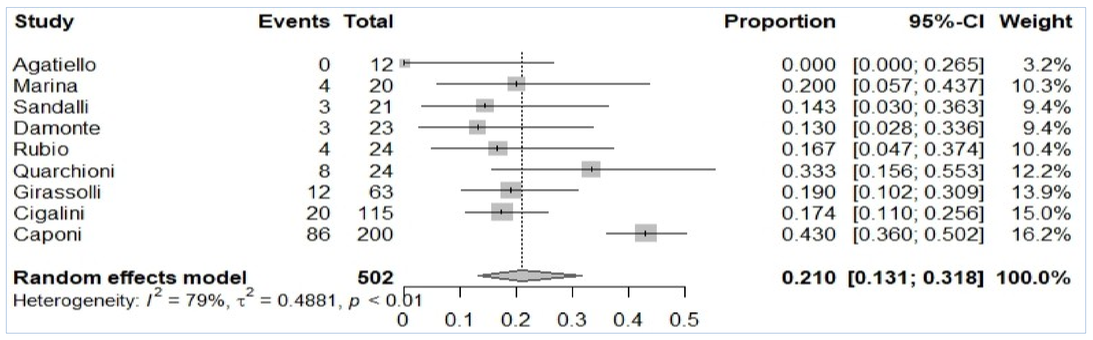

FIGURE II – ***30-day permanent pacemaker implantation***

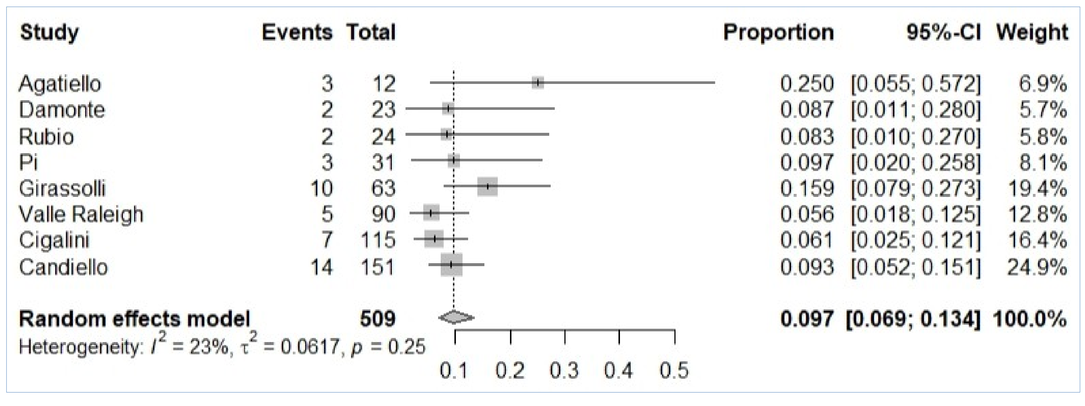

FIGURE III – ***30-day Mortality***

Conclusions: *this is the first meta-analysis about TAVR performance in a real-life setting in Argentina. Overall results are better than those reported for the region but worse than those reported for Europe or USA.*

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