

SUPPLEMENTARY DATA

Table 1 of the supplementary data

Characteristics of the studies evaluating concomitant percutaneous mitral and tricuspid valve repair

Study	Number of patients	Number of centers	Study design	Device(s)	Follow-up	Concomitant mitral repair	Exclusion criteria
Nickenig et al. 2017 ¹	22	10	Observational	MitraClip NT	In-hospital	22 (100)	Systolic pulmonary pressure > 60 mmHg Coaptation defect > 20 mm.
Mehr et al. 2019 ²	249	14	Observational	MitraClip NT/XTR	1 y	129 (51.8)	Heart Team rejection
Ali et al. 2021 ³	20	1	Observational	MitraClip XTR	30 d	13 (65)	Heart Team rejection
Mahowald et al. 2021 ⁴	38	1	Observational	MitraClip	1 y	33 (87)	Heart Team rejection
Hausleiter et al. 2021 ⁵	181	4	Observational	PASCAL	6 mo	16 (9)	NA

NA, not available.

The data are expressed as absolute numbers or No. (%).

Table 2 of the supplementary data

Clinical characteristics for the studies assessing concomitant percutaneous mitral and tricuspid valve repair

Study	Age	Female	Atrial fibrillation	Prior CIED	sPAP	≥ severe TR	Functional TR	NYHA class 3-4	EuroSCORE II
Nickenig et al. 2017 ¹	76.9 ± 10.3	12 (54)	18 (82)	8 (36)	42.5 ± 15.0	20 (91)	22 (100)	22 (100)	NA
Mehr et al. 2019 ²	77 ± 9	128 (51.4)	183 (73.8)	74 (29.7)	43.6 ± 16	241 (96.8)	223 (89.6)	238 (95.6)	8.1 ± 7.4
Ali et al. 2021 ³	78.1 ± 4.3	8 (40)	19 (95)	5 (25)	50 ± 7.4	20 (100)	17 (85)	20 (100)	13 ± 4.5
Mahowald et al. 2021 ⁴	78.6 ± 14.3	15 (39)	34 (89)	13 (34)	55 ± 16	38 (100)	32 (84)	25 (69)	NA
Hausleiter et al. 2021 ⁵	78 ± 8	92 (51)	168 (93)	58 (32)	47 ± 19	166 (85)	148 (82)	165 (91)	5.5 ± 5.6
Weighted means or proportions	77.3 [77.2-77.4]	255/510 (50)	422/510 (82.7)	158/510 (31)	43.8 [43.6-44.1]	485/510 (95.1)	442/510 (86.7)	470/510 (92.2)	7 [6.9-7.1]

CIED, cardiovascular implantable electronic device; NA, not available; sPAP, systolic pulmonary artery pressure; TR, tricuspid regurgitation.

The data are expressed as No. (%), mean ± standard deviation, or median [interquartile range].

Table 3 of the supplementary data

Procedural and early outcomes from the studies assessing concomitant percutaneous mitral and tricuspid valve repair

Study	Technical success	Conversion to surgery	Number of devices	Procedural time	30-d mortality	30-d stroke	30-d major bleeding	30-d PPI	30-d ≥ severe TR	30-d NYHA 3-4
Nickenig et al. 2017 ¹	22 (100)	0	1.51 ± 1	117 ± 69	0	0	2 (9)	NA	2 (9)	15 (75)
Mehr et al. 2019 ²	239 (96)	1 (0.4)	2 ± 1	136 ± 62	7 (2.8)	2 (0.8)	15 (6)	NA	57 (23)	NA
Ali et al. 2021 ³	NA	0	2.3 ± 0.4	NA	0	0	0	NA	5 (25)	3 (15)
Mahowald et al. 2021 ⁴	NA	NA	NA	NA	1 (2.6)	NA	NA	NA	14 (37)	NA
Hausleiter et al. 2021 ⁵	178 (98.4)	0	1.7 ± 0.6	94 ± 43	NA	NA	NA	NA	42 (23)	NA
Weighted means or proportions	439/452 (95.1)	1/472 (0.2)	1.88 [1.86-1.9]	115 [113-117]	8/329 (2.4)	2/291 (0.7)	17/291 (6)		120/452 (26.5)	18/42 (42.8)

NA, Not available; NAP, not applicable; NYHA, New York Heart Association; PPI, permanent pacemaker implantation; TR, tricuspid regurgitation.

The data are expressed as No. (%), mean ± standard deviation, or median [interquartile range].

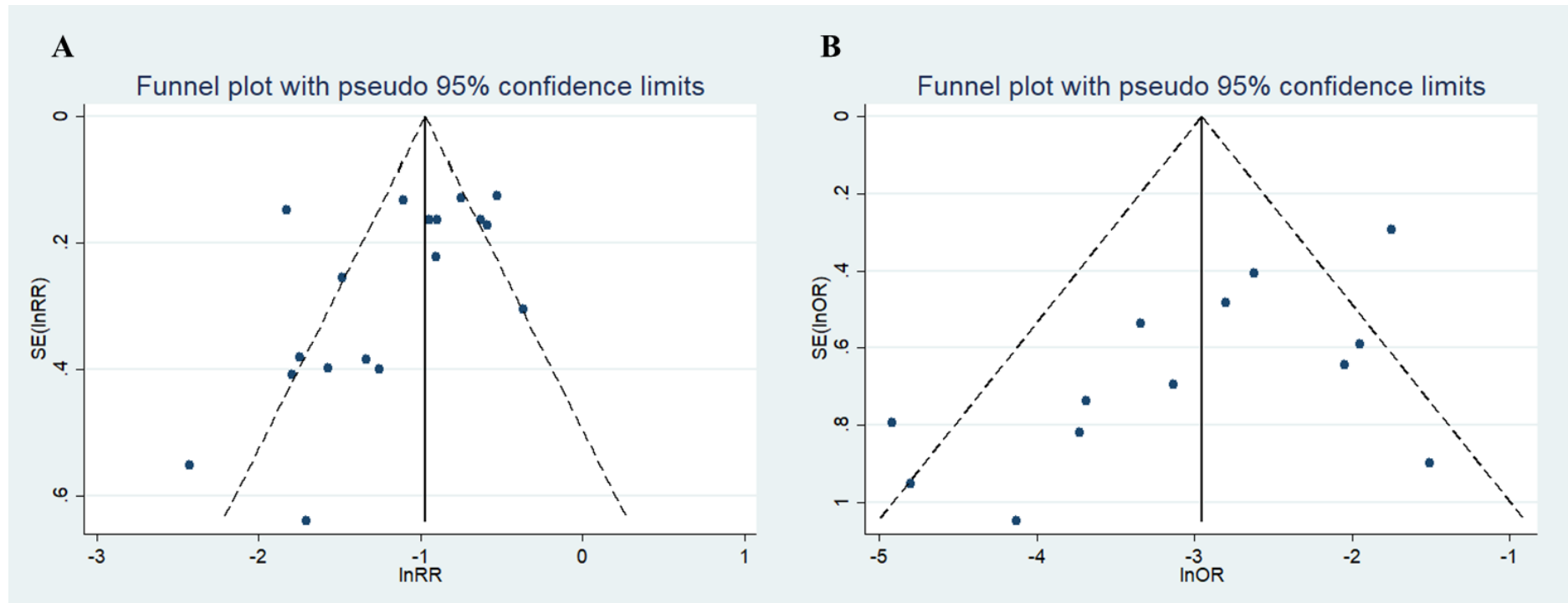
Table 4 of the supplementary data

Egger regression *P* values for pooled comparisons

Comparisons	Egger regression coefficient	Egger regression <i>P</i> value
≥ severe TR	-1.06	0.44
NYHA class 3-4	-1.11	0.12
Vena contracta width	1.71	0.70
RV diameter	0.08	0.85

NYHA, New York Heart Association; RV, right ventricle; TR, tricuspid regurgitation.

Figure 1 of the supplementary data. Funnel plots



Funnel plots of the included studies for the following outcomes: \geq severe TR (A) and NYHA class 3 or 4 at last follow-up (B).

NYHA, New York Heart Association; TR, tricuspid regurgitation.

References of the supplementary data

1. Nickenig G, Kowalski M, Hausleiter J, et al. Transcatheter Treatment of Severe Tricuspid Regurgitation with the Edge-to-Edge Mitraclip Technique *Circulation*. 2017;135:1802-1814.
2. Mehr M, Taramasso M, Besler C, et al. 1-Year Outcomes After Edge-to-Edge Valve Repair for Symptomatic Tricuspid Regurgitation: Results From the TriValve Registry. *JACC Cardiovasc Interv*. 2019;12:1451-1461.
3. Ali FM, Ong G, Edwards J, Connelly KA, Fam NP. Comparison of transcatheter tricuspid valve repair using the MitraClip NTR and XTR systems. *Int J Cardiol*. 2021;327:156-162.
4. Mahowald MK, Nishimura RA, Pislaru S V., et al. Reduction in Right Atrial Pressures Is Associated With Hemodynamic Improvements After Transcatheter Edge-to-Edge Repair of the Tricuspid Valve. *Circ Cardiovasc Interv*. 2021.
<http://dx.doi.org/doi:10.1161/circinterventions.121.010557>
5. J. Hausleiter. First commercial multicenter experience with the PASCAL transcatheter valve repair system for tricuspid regurgitation. TVT 2021; 20-21 July 2021; Virtual Conf.