Table 1. Newcastle-Ottawa scale for the included studies

Study	Selection	Comparability*	Outcomes	Total
Eng 2021[31]	****	Unknown	***	7
Yoon 2019[4]	****	Unknown	**	6
McElhinney 2019[32]	****	Unknown	**	6
Abdel-Wahab 2018[33]	****	Unknown	***	7
Eng 2017 [34]	***	Unknown	**	5
Whisenant 2015[35]	***	Unknown	**	5

*No comparison between patients with and without anticoagulants was performed in any study.

Table 2. Characteristics of studies included

Study	Design	Regimen	No. of patients	Follow-up (days)+	Procedure
Eng 2021[31]	Observational study	OAC APT	67 14	511	Mitral ViV, ViR and ViMAC
Yoon 2019[4]	Observational study	OAC APT Unknown	295 116 110	160	Mitral ViV, ViR and ViMAC
McElhinney 2019[32]	Observational study	OAC APT Combined	70 135 82	484#	Tricuspid ViV and ViR
Abdel-Wahab 2018[33]	Observational study	OAC APT None	97 195 4*	NR	Aortic ViV
Eng 2017[34]	Observational study	OAC APT	10 3	150	Mitral ViV and ViR
Whisenant 2015[35]	Case series	OAC APT	3 8	NR	Mitral ViV and ViR and tricuspid ViV

Abbreviations: APT, antiplatelet treatment; NR, not reported; OAC, oral anticoagulation; ViV, valve-in-valve; ViR, valve-in-ring; ViMAC, valve-in-mitral annular calcification.

*These patients were excluded from the analysis.
#It is mentioned that 56 patients had a follow-up of less than two years; however, no information is provided regarding actual loss to follow-up. No other study refers patients losing follow-up.
+ Follow-up is reported as mean for Eng 2017 and as median for the remaining studies.

GRADE Summary Table

No. of participants (studies)	Study design	Risk of bias	Inconsistency	Imprecision	Indirectness	Publication bias	Certainty of evidence[1]	Effect estimate (OR [95% CI])
1082 (6 observational studies)	Observational	Serious	Not serious	Not serious	Not serious	Unclear	Moderate ✳✳✳☆	0.18 (0.07–0.42) 0.16 (0.07-0.379

[1]Certainty of evidence graded according to GRADE: ✳✳✳☆ = moderate