

2023 대한심장혈관흉부외과학회

# 제55차 추계학술대회 & APELSO 2023

2023. 11. 02 (Thu) - 11. 04 (Sat), 그랜드 인터컨티넨탈 파르나스 서울

## Comparison of clinical outcomes of On-X valve in aortic position in patients with different INR target strategy

### 공지사항

- 소속기관이나 저자명이 드러나지 않도록 해주세요.
- 제목 슬라이드 포함 최대 6장, Font size 20 이상
- PPT 파일 작성 후 PDF로 전환해서 접수(필수)

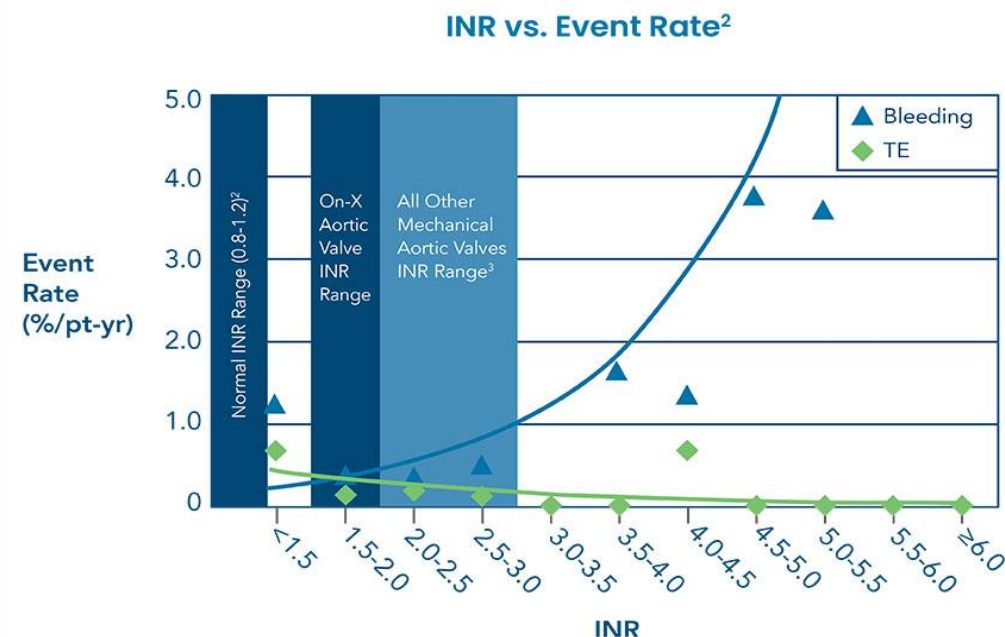


- Mechanical Aortic valve : needed anticoagulation (Vitamin K antagonist)
  - On-X : Low INR (1.5-2.0) + aspirin (2020 ACC/AHA Guideline)
- Different strategies two hospitals
  - Standard INR (2.0-2.5) vs Low INR (1.5-2.0)
- Objective
  - Low INR target is safe as standard INR ?

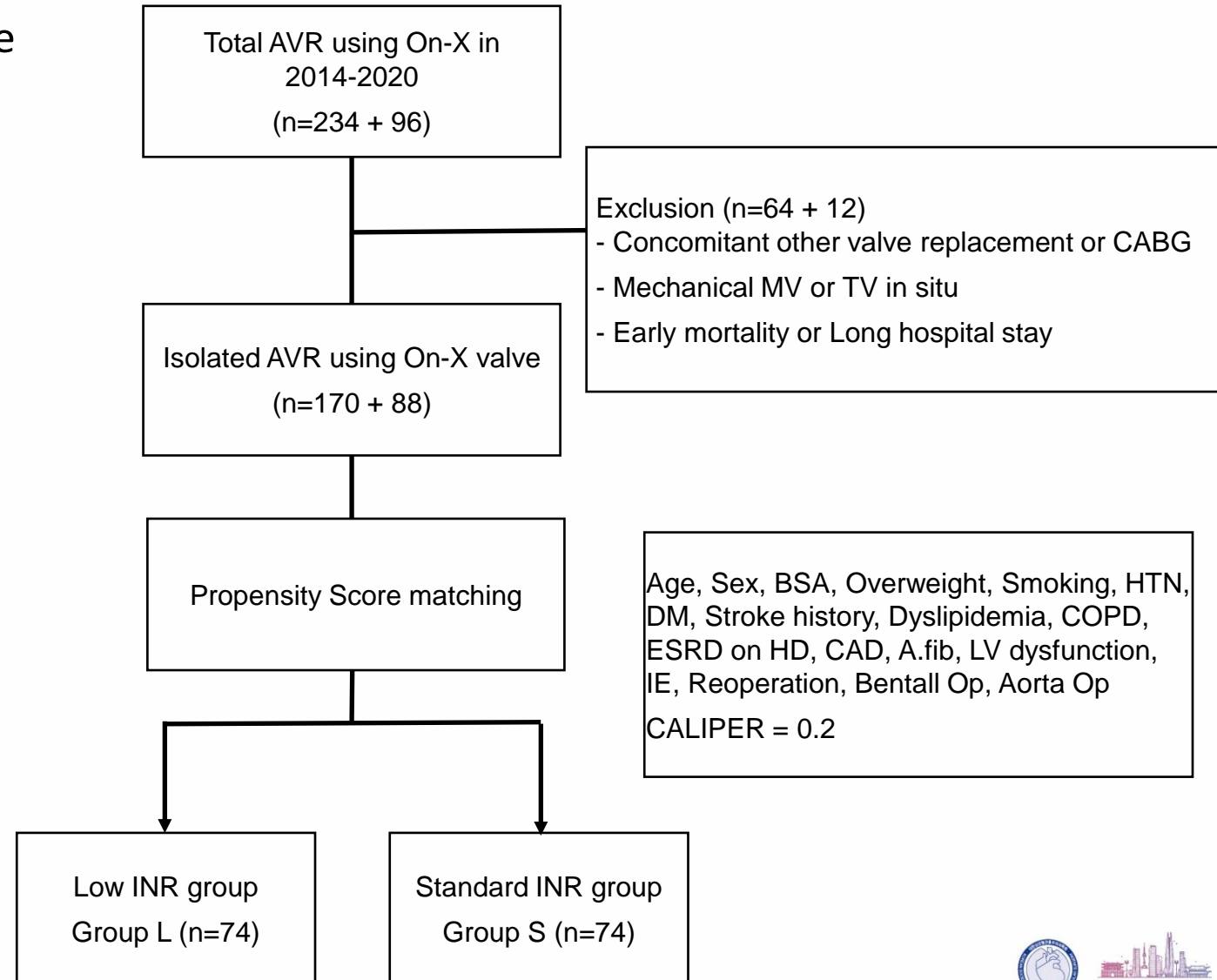


## Reduced anticoagulation after mechanical aortic valve replacement: Interim results from the Prospective Randomized On-X Valve Anticoagulation Clinical Trial randomized Food and Drug Administration investigational device exemption trial

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- January, 2014 – December, 2020, retrospective
- Mechanical (On-X) Aortic valve replacement
- Two different hospitals (different INR targets)
- Total 170 + 88 (258) patients
- Propensity Score matching
- Exclusion criteria
  - Other valve replacement or CABG
  - Previous mechanical MVR or TVR patients
  - Early mortality or Long hospital stay
- INR follow up period
  - Discharge+6weeks – after 1Y 6Months (18 months)
- Clinical outcomes (major events)
  - Thromboembolic events, Bleeding events



## Preoperative characteristics

	Overall Cohort			Propensity-Matched Cohort		
Characteristics	Standard (N=170)	Low INR (N=88)	Standardized Difference	Standard (N=74)	Low INR (N=74)	Standardized Difference
Age	54.1±11.88	53.93±13.98	-0.013	53.82±11.85	53.76±14.39	-0.0051
Female Sex	52 (30.59)	18 (20.45)	0.234	21 (28.38)	17 (22.97)	0.124
BSA	1.76±0.21	1.76±0.19	0.0005	1.77±0.18	1.78±0.18	0.0039
HTN	57 (33.53)	40 (45.45)	0.2458	33 (44.59)	34 (45.95)	0.0272
DM	18 (10.59)	13 (14.77)	0.126	9 (12.16)	11(14.86)	0.0791
Dyslipidemia	33 (19.41)	23 (26.14)	0.1609	20 (27.03)	20(27.03)	0
Stroke history	12 (7.06)	11 (12.50)	0.184	5 (6.76)	6(8.11)	0.0515
COPD	0 (0.00)	4 (4.55)	0.3086	0 (0)	0 (0)	0
ESRD on HD	2 (1.18)	4 (4.55)	0.2031	1 (1.35)	3 (4.05)	0.1672
A.fib	16 (9.41)	9 (10.23)	0.0274	11(14.86)	7 (9.46)	-0.1659
CAD	11 (6.47)	2 (2.27)	-0.2064	1 (1.35)	2 (2.70)	0.096
LV dysfunction	8 (4.76)	8 (9.20)	0.1747	4 (5.41)	7 (9.46)	0.155

Standard (N=170)					Low INR (N=88)				
average	median	Total days	Target days	TTR	average	median	Total days	Target days	TTR
2.17±0.23	2.16	8.76	4.38	0.48	1.97±0.37	1.89	5.44	2.39	0.44

	Overall Cohort			Propensity-Matched Cohort		
Outcome	Standard (N=170)	Low INR (N=88)	p-value	Standard (N=74)	Low INR (N=74)	p-value
LCOS	7 (4.12)	0 (0)	0.0992	3 (4.05)	0 (0)	-
Bleeding	7 (4.12)	2 (2.27)	0.7224	5 (6.76)	1 (1.35)	0.2188
AKI	4 (2.35)	0 (0)	0.3026	2 (2.70)	0 (0)	-
A.fib	32 (18.82)	12 (13.63)	0.294	16 (21.62)	10 (13.51)	0.195
Mediastinitis	1 (0.59)	0 (0)	>0.9999	1 (1.35)	0 (0)	-
Brain infarction	2 (1.18)	4 (4.55)	0.089	1 (1.35)	2 (2.70)	0.560
Brain hemorrhage	1 (0.59)	1 (1.14)	0.634	1 (1.35)	0 (0)	-
CAVB	3 (1.76)	0 (0)	0.5532	1 (1.35)	0 (0)	-
Respiratory complication	9 (5.29)	2 (2.27)	0.3412	6 (8.11)	1 (1.35)	0.125

## Follow-up results

	Overall Cohort			Propensity-Matched Cohort		
Outcome	Standard (N=170)	Low INR (N=88)	p-value	Standard (N=74)	Low INR (N=74)	p-value
Death	5	1	0.401	3	1	0.3283
Re operation	2	0	0.6404	2	0	0.3636
Endocarditis	2	0	0.6742	1	0	0.5944
TE	5	0	0.3364	5	2	0.3132
Bleeding	5	1	0.4914	2	1	0.9154

## TE and bleeding Events during f/u

	TE EVENT	Time	INR
1	Rt MCA infarction	21M	2.12
2	Lt SCA, PCA infarction	17M	1.96
3	Both Popliteal artery occlusion	1M	1.08
4	Rt MCA infarction	5M	1.44
5	Rt MCA infarction	26M	1.66
	Bleeding event	Time	INR
1	Small bowel bleeding	42M	2.43
2	Hemoptysis	31M	NA
3	Rt thigh artery bleeding	11M	2.54
4	Small bowel bleeding	3M	3.07
5	Colon bleeding	21M	3.46
1	Small bowel bleeding	3M	2.17

## Conclusion

- Low INR (1.5-2.0) Strategy for On-X valve in aortic position showed comparable early clinical outcomes compared to Standard INR (2.0-2.5) strategy.