

Minimally Invasive Trans-Axillary Aortic Valve Replacement: Early Outcomes and Program Adoption in a Contemporary Series

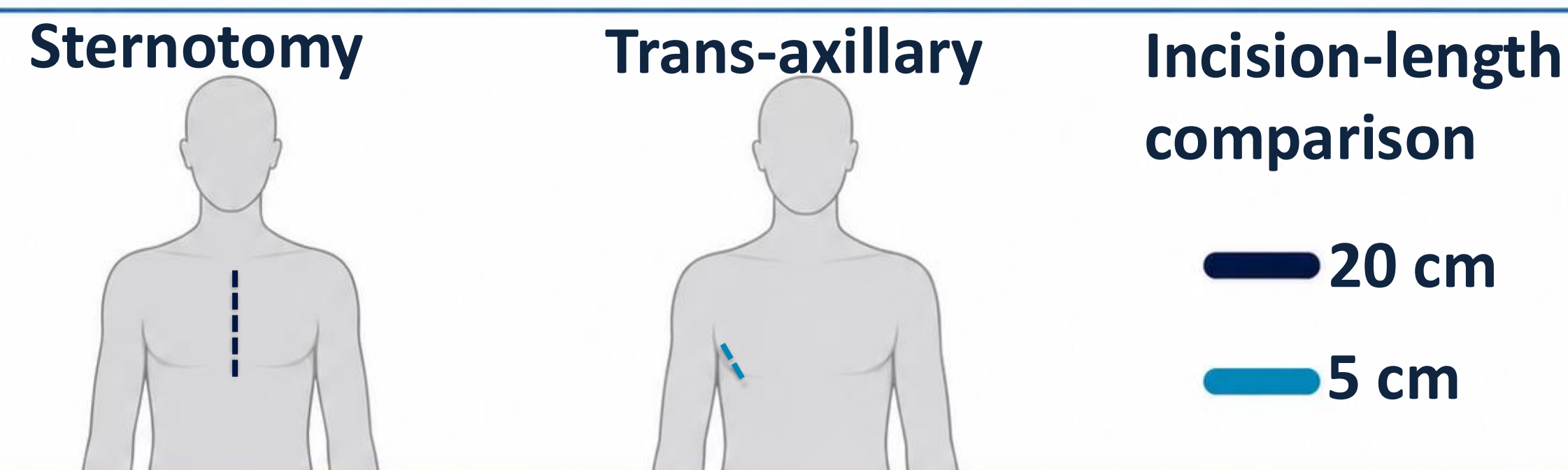
István Gecse, Barnabás Géczi, Sándor Varga, Anna Székér, Szilárd Szűcs, Tamás Donauer, Antal Szabó-Biczók, Gábor Bari
Department of Cardiac Surgery, University of Szeged, Hungary

BACKGROUND

- MIAVR relevance growing in TAVI era
- Adoption limited by learning curve concerns
- Structured programs improve reproducibility
- Applicable to centers with limited MI experience

OBJECTIVE

Evaluate feasibility, safety and enhanced recovery outcomes of trans-axillary MIAVR in a center with limited prior MICS experience



METHODS

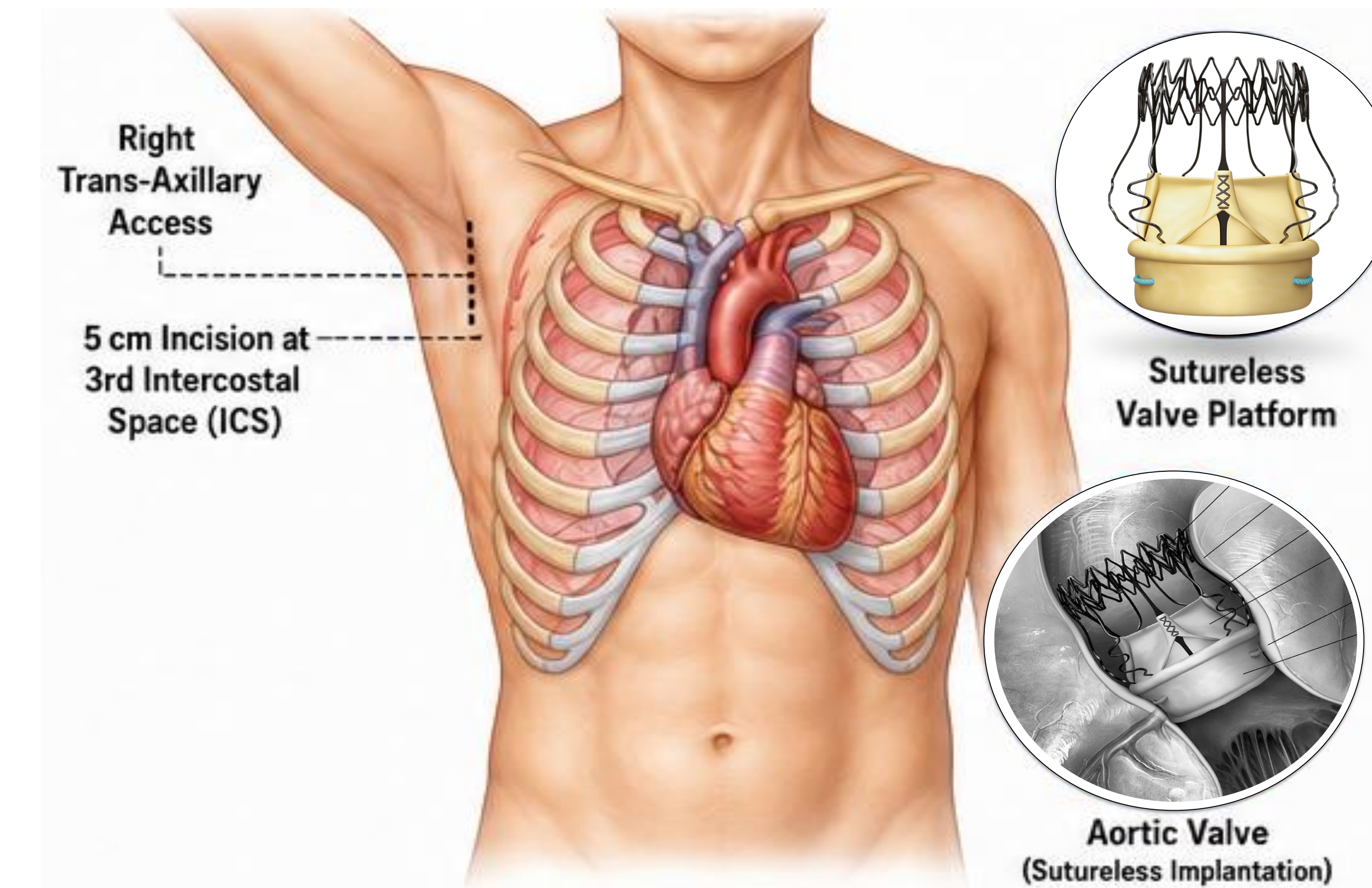
n=45 patients

Collected data on 45 consecutive patients undergoing trans-axillary MIAVR between 2024 and 2025

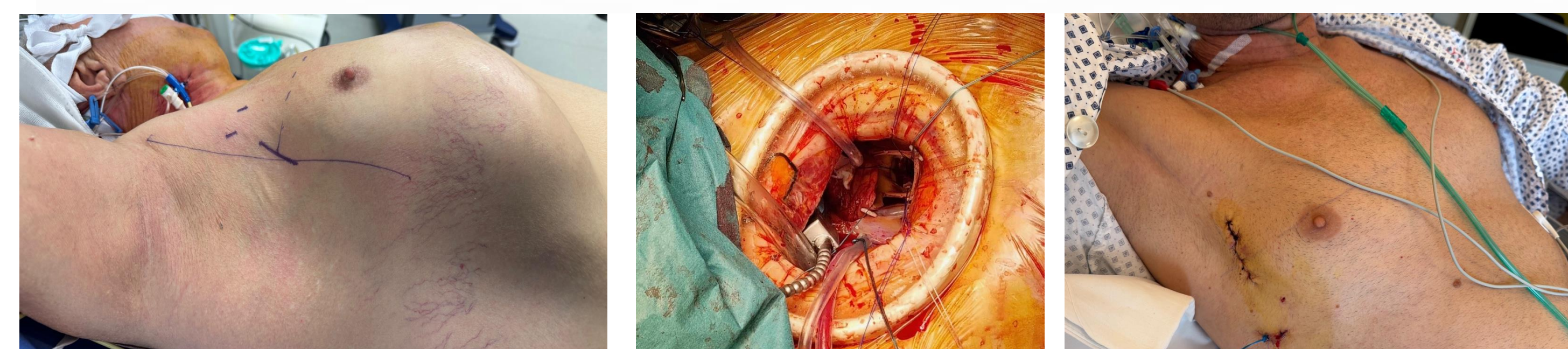
- retrospective
- descriptive – non-comparative
- focused on demographics, pre-operative, intra-operative and post-operative parameters



SURGICAL APPROACH AND KEY STEPS



OPERATIVE PEARLS



ENHANCED RECOVERY PATHWAY



RESULTS

1 DEMOGRAPHICS

Average age (years)	Average height (cm)	Average weight (kg)	Average BMI (kg/m ²)	Average BSA (m ²)	Average EuroSCORE II (%)	Average STS operative mortality (%)	Average STS morbidity & mortality (%)
70.41	170.17	83.88	28.87	1.99	1.36	1.78	8.30

2 PREOPERATIVE ECHOCARDIOGRAPHIC FINDINGS

LVEF (%)	Aortic valve area (cm ²)	Mean aortic valve gradient (mmHg)	Peak aortic valve gradient (mmHg)	Aortic annulus size (mm)	Aortic root diameter (mm)
60.17	0.72	50.85	82.32	22.83	32.10

3 INTRAOPERATIVE VARIABLES

24 h blood loss (ml)	Intubation time (hrs)	Cardiopulmonary bypass time (minutes)	Aortic cross clamp time (minutes)
282.41	12.73	114.39	63.44

4 POSTOPERATIVE OUTCOMES

Postop stroke	Sternotomy conversion	Reexploration for bleeding	New onset AFib
0	1	0	4
Postop AKI	Wound infection	ICU stay (days)	Hospital stay (days)
2	0 (0.00%)	1.24	10.52

5 POSTOPERATIVE ECHOCARDIOGRAPHIC FINDINGS

LVEF (%)	Mean aortic valve gradient (mmHg)	Peak aortic valve gradient (mmHg)
60.34	12.76	20.24

CONCLUSIONS



Trans-axillary MIAVR is safe, reproducible, and adoptable – even in centers without extensive prior minimally invasive experience. Structured program implementation enables excellent early outcomes.



TAKE HOME MESSAGE:

Structured trans-axillary MIAVR delivers excellent post-op results with excellent outcomes and rapid recovery - reproducible program for broader adoption



CORRESPONDANCE
Gábor Bari MD PhD
drbarigabor@gmail.com