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IS SURTAVI RISK MODEL A STEP TOWARDS 'TAVI RISK SCORE': TIME TO RETHINK?

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Introduction During the design of the SURTAVI trial, a new concept of risk stratification for patients with aortic stenosis, based upon age combined with a fixed number of predefined risk factors including frailty, was proposed. The purpose of this study was to compare the performance of SURTAVI model with surgical risk scores that is, logistic EuroSCORE (LES), EuroSCORE II (ES II) and STS score in predicting 30-day and 1-year mortality in patients selected by the 'Heart Team' for Transcatheter Aortic Valve Implantation (TAVI) after formal surgical turn down.

Methods –88 consecutive patients who underwent TAVI in a single institute, via trans-femoral, trans-subclavian, trans-apical and other approaches, were included. LES, ES II and STS score were calculated retrospectively. Patients were classified into low, intermediate and high risk groups according to SURTAVI model (table 1) and surgical risk scores (LES <10, 10–20, >20%, ES II <4, 4–10, >10% and STS <4, 4–10, >10% respectively). Actual 30-day and 1-year mortality was compared.

Results Mean age was 79.9 years and 39.8% were females. Overall 30-day and 1-year mortality was 7.9% and 25% respectively. There was no statistically significant difference in mortality between low, intermediate and high risk groups according to SURTAVI risk model and other surgical risk scores, both at 30 days and 1 year. Results are summarised in the table 2.

Conclusions SURTAVI model was no better than other risk scores in predicting mortality, both at 30 days and 1 year, in patients undergoing TAVI after formal surgical turn down. This highlights

Table 1

SURTAVI Risk Model			
Age	Low risk	Intermediate risk	High risk
70–74 years	<2 risk factors	2–3 risk factors	>3 risk factors
75–79 years	no risk factor	1–2 risk factors	>2 risk factors
≥80 years	—	0–1 risk factor	>1 risk factors

Table 2

30-day mortality (%)				
Groups	LES	ES II	STS-score	SURTAVI model
Low risk	8.3	5.9	10.0	16.7
Intermediate risk	11.4	11.1	8.2	11.1
High risk	4.9	5.7	5.3	6.3
p Value	0.562	0.875	1.0	0.376
1-year mortality (%)				
Low risk	25.0	23.5	10.0	16.7
Intermediate risk	22.9	19.4	30.6	11.1
High risk	26.8	31.4	26.3	29.7
p Value	0.943	0.502	0.203	0.254

the deficiencies of proposed SURTAVI model in the TAVI population and places the emphasis on the role of multidisciplinary 'Heart Team' in patient selection and need to develop more sophisticated TAVI risk model.