1   Table 1. Demographics and baseline characteristics.

2

Variable	n (%)	LR	p-value
Age [a]	58.6 ± 10.9	0.088	0.766
Male	27 (44.3%)	0.088	0.766
NYHA class			
I & II	46 (75.4%)	10.488	0.001 *
III & IV	15 (24.6%)		
Hypertension	23 (37.7%)	0.417	0.519
Diabetes mellitus	9 (14.8%)	1.480	0.224
Dyslipidemia	8 (13.1%)	4.182	0.141
Chronic lung disease	10 (16.4%)	0.000361	0.985
Extracardiac arteriopathy	2 (3.3%)	2.201	0.138
Previous cardiac surgery	4 (6.6%)	0.858	0.354
Previous chest irradiation	1 (1.6%)	N/A	N/A
Active endocarditis	1 (1.6%)	N/A	N/A
Preoperative MCS	1 (1.6%)	N/A	N/A
Urgent operation	4 (6.6%)	3.669	0.055
Atrial fibrillation	52 (85.2%)	2.026	0.155
LV function [b]			
LVEF ≥50%	45 (73.8%)	4.860	0.027 *
LVEF 31-49%	12 (19.7%)		
LVEF 21-30%	4 (6.6%)		
LVEF ≤20%	0		

RV function			
Impaired	10 (16.4%)	6.715	0.010 *
Normal	36 (59.0%)		
Missing	15 (24.6%)		
Mean pulmonary artery pressure [b]			
<25mmHg	15 (24.6%)	0.166	0.684
25-40mmHg	31 (50.8%)		
41-55mmHg	12 (19.7%)		
>55mmHg	3 (4.9%)		
History of ADHF	35 (57.4%)	2.033	0.154

[a]: Comparison between those older than 60 and those younger than 60

[b]: Comparison between those with LVEF ≥50% and those with LVEF <50%

[c]: Comparison between those with mPAP ≥ 41mmHg and those ≤ 40mmHg

3

4   Table 2. Operative details.

5

Variable	n (%) or Mean ± SD
Mitral valve procedure	
Repair	3 (4.9%)
Tissue valve	5 (8.2%)
Mechanical valve	53 (86.9%)
Aortic valve procedure	
Tissue valve	7 (11.5%)

Mechanical valve	54 (88.5%)
Tricuspid valve procedure	
Repair	61 (100%)
Tissue valve	0
Mechanical valve	0
Etiology	
Rheumatic	43 (70.5%)
Degenerative	16 (26.2%)
Endocarditis	2 (3.3%)
Concomitant CABG	6 (9.8%)
Crossclamp time (min)	132 ± 24 min
Cardiopulmonary bypass time (min)	186 ± 30 min

6

7   Table 3. Postoperative complications.

8

Complications	n (%)
Death	
- Multiorgan failure	5 (8.2%)
- Perforated peptic ulcer with refractory sepsis	1 (1.6%)
Mechanical circulatory support	
- Extracorporeal membrane oxygenation	1 (1.6%)
- Intra-aortic balloon pump	4 (6.6%)
Prolonged ventilation	8 (13.1%)
Dialysis	8 (13.1%)
Acute liver failure	4 (6.6%)

Permanent pacemaker implantation	0
Resternotomy for bleeding	4 (6.6%)
Sternal dehiscence	1 (1.6%)
Permanent stroke	4 (6.6%)
Intracranial haemorrhage	2 (3.3%)

9

10   Table 4. Biochemical disturbances and relative risk of operative mortality.

11

Variable	n (%)	LR	p-value
Renal function			
Normal	58 (95.1%)	7.336	0.026 *
Creatinine over 200 ųmol/L	2 (3.3%)		
ESRF on dialysis	1 (1.6%)		
Total bilirubin (mg/dL)			
< 2.0 mg/dL	53 (86.9%)	11.096	0.001 *
2.0 – 3.0 mg/dL	5 (8.2%)		
> 3.0 mg/dL	3 (4.9%)		
Sodium (mEq/L)			
≥135 mEq/L	53 (86.9%)	11.096	0.001 *
<135 mEq/L	8 (13.1%)		
Albumin (g/dL)			
≥3.5g/dL	53 (86.9%)	9.966	0.002 *
<3.5g/dL	8 (13.1%)		

12

13   Table 5. Unadjusted short-term outcomes between MELD-Na subgroups.

14

Complications	MELD-Na ≤ 9 (n = 42)	MELD-Na >9 (n = 19)	p-value
Operative mortality	0	6 (31.6%)	0.00008 *
Postoperative MCS	2 (4.76%)	4 (21.1%)	0.058 *
Prolonged ventilation	2 (4.76%)	6 (31.6%)	0.006 *
Dialysis	1 (2.4%)	7 (36.8%)	0.0003 *
Acute liver failure	0	4 (21.1%)	0.002 *

15

16   Table 6. Hierarchical logistic regression analysis of associations between MELD-Na and operative

17   mortality and morbidities.

18

Complications	Adjusted OR	95% CI	p-value
Operative mortality	1.405	1.069 – 1.846	0.015 *
Postoperative MCS	2.051	1.258 – 3.344	0.004 *
Prolonged ventilation	1.921	1.101 – 3.350	0.022 *
Dialysis	5.677	1.003 – 32.13	0.050 *
Acute liver failure	1.763	1.119 – 2.779	0.015 *

19

20   Table 7. Hierarchical logistic regression analysis of associations between MELD-Na components and

21   operative mortality.

22

MELD-Na component	Adjusted OR	95% CI	p-value
Bilirubin	2.466	1.060 – 5.738	0.036 *

Sodium	0.037	0.575 – 0.982	0.037 *
Albumin	0.806	0.660 – 0.985	0.035 *
Creatinine	1.006	0.997 – 1.016	0.189

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