Supplemental material
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Open Heart

SUPPLEMENTAL MATERIAL

Supplemental Table 1. Clinical follow up of the Impella group. Continuous data are expressed as median with interquartile range. * indicates p ≤ 0.05 among the time points.

	t0	t24	t72	p-value
Serum lactate (mmol/L)	3.2 (1.7; 5.9)	1.6 (1.2; 3.2)	1.5 (1.1; 2.1)	***0.001**
pH	7.35 (7.27; 7.43)	7.41 (7.34; 7.46)	7.43 (7.39; 7.46)	***0.001**
Laktatdehydrogenase (U/l)	515 (305; 937)	1266 (895; 1549)	673 (661; 1624)	***0.011**
C-reactive proteine (mg/dl)	3.6 (0.7; 11.3)	10.5 (6.4; 15.5)	14.7 (8.6; 14.7)	***0.022**
Leukocytes (1000x/µl)	14.8 (10.9; 19.1)	12.9 (10; 16.5)	13.1 (9.6; 16.1)	0.163
GOT (U/l)	166 (68; 468)	560 (233; 1649)	350 (117; 1189)	***0.018**
GPT (U/l)	98 (96; 437)	192 (72; 1175)	191 (63; 878)	0.106
Bilirubine (mg/dl)	0.8 (0.46; 1.1)	1.9 (0.93; 2.59)	1.51 (1.06; 2.73)	***0.019**
GFR (ml/min)	53 (36; 71)	39 (24; 66)	41 (27; 62)	0.167
Hemoglobin (g/dl)	13.2 (11.3; 14.7)	10.3 (8.7; 11.8)	9.8 (8.3; 10.5)	***0.001**
Inotropic Score	21.57 (5.51; 57.79)	29.74 (7.75; 63.10)	11.85 (4.22; 31.33)	0.073
pO_2/ FiO_2 (mmHg)	210 (172; 261)	231 (216; 294)	247 (161; 430)	0.487
PEEP in ventilated patients (mmHg)	9 (8.1; 9.9)	8 (7.8; 9.5)	8 (7.6; 9.5)	0.902

GFR = Glomerular filtration rate. GOT = Glutamate-Oxaloacetate Transaminase. GPT = Glutamate-Pyruvate Transaminase. pO_2 = partial pressure pf oxygen in arterial blood. FiO_2 = Fraction of inspired oxygen. PEEP = positive end-expiratory pressure

Supplemental Table 2. Clinical follow up of the IABP group. Continuous data are expressed as median with interquartile range. * indicates p ≤ 0.05 among the time points.

	t0	t24	t72	p-value
Serum lactate (mmol/L)	2.9 (1.4; 5.7)	1.6 (1.2; 2.3)	1.3 (1; 1.8)	***0.001**
pH	7.38 (7.30; 7.43)	7.42 (7.34; 7.47)	7.43 (7.37; 7.45)	0.357
Laktatdehydrogenase (U/l)	368 (288; 789)	797 (356; 1135)	457 (330; 911)	0.052
C-reactive proteine (mg/dl)	3.5 (1.1; 10.3)	9.7 (3.6; 15.4)	14.7 (8.8; 24.7)	***0.001**
Leukocytes (1000x/µl)	12.7 (9.8; 16)	11.6 (8.8; 14.8)	10.4 (7.7; 13.4)	***0.010**
GOT (U/l)	97 (42 ;227)	171 (58; 662)	201 (54; 461)	0.347
GPT (U/l)	58 (28; 136)	70 (33; 196)	106 (43; 703)	0.095
Bilirubin (mg/dl)	0.66 (0.34; 1.28)	0.8 (0.49; 1.36)	0.88 (0.64; 1.41)	0.085
GFR (ml/min)	45 (25; 60)	47 (27; 65)	47 (32; 60)	0.727
Hemoglobin (g/dl)	12.8 (10.7; 14.1)	11.1 (9.4; 12.8)	10.8 (9.2; 11.7)	***0.001**
Inotropic Score	16.5 (0; 37.82)	15.32 (4.66; 28.66)	14.7 (3.87; 40.48)	***0.010**
pO$_2$/ FiO$_2$ (mmHg)	237 (161; 292)	254 (157; 331)	257 (218; 321)	0.188
PEEP in ventilated patients (mmHg)	8 (7.1; 11.1)	8 (6.9; 10.5)	8 (6.0/ 9.2)	0.486

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GFR = Glomerular filtration rate, GOT = Glutamate-Oxaloacetate Transaminase, GPT = Glutamate-Pyruvate Transaminase. pO_2 = partial pressure pf oxygen in arterial blood. FiO_2 = Fraction of inspired oxygen. PEEP = positive end-expiratory pressure

Supplemental Table 3: Characteristics of mechanically-ventilated patients and non-ventilated patients.

	Mechanically ventilated n=78	Non-ventilated n=22	p
Halperin Score t0	215 (199; 230)	220 (172; 249)	0.943
Halperin Score t24h	210 (195; 213)	205 (158; 221)	0.546
Halperin Score t72h	183 (171; 199)	195 (151; 214)	0.853
Decongestion n, (%)	27 (35)	8 (36)	0.879
pO_2/ FiO_2 at t0 (mmHg)	218 (187; 259)	209 (167; 278)	0.452
pO_2/ FiO_2 at t24h (mmHg)	246 (225; 286)	252 (212; 292)	0,865
pO_2/ FiO_2 at t72h (mmHg)	247 (190; 358)	255 (221; 312)	0.934
Pneumonia n, (%)	50 (64)	14 (64)	0.832

Categorical variables are reported as absolute values and percentages, whereas continuous data are expressed as median with interquartile range. *pO_2 = partial pressure pf oxygen in arterial blood. FiO_2 = Fraction of inspired oxygen. PEEP = positive end-expiratory pressure*

Supplemental Table 4. Univariate logistic regression analysis for pulmonary decongestion. * indicates p ≤ 0.05.

	OR	95% CI	p-value
Age	0.95	0.90-0.99	*0.021
Impella 2.5/CP	3.27	1.37-7.81	*0.008
Impella CP	0.51	0.166-1.592	0.249
MCS support length	1.31	0.98-1.64	0.201
Reduced left ventricular function	0.83	0.23-2.94	0.768
Mechanical ventilation	0.71	0.18-2.85	0.630
GFR	0.99	0.97-1.02	0.581
Total fluid balance t24h	1.00	0.99-1.00	0.277
Total fluid balance t72h	1.01	0.98-1.01	0.577
Renal replacement therapy	1.50	0.43-5.23	0.525
Central venous pressure	0.98	0.87-1.11	0.756
PCI	0.33	0.11-1.01	0.056

CI=confidence interval; OR=Odds ratio; GFR = Glomerular filtration rate; PCI = Percutaneous coronary intervention.

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Supplemental Table 5. Univariate logistic regression analysis for the risk of pneumonia. * indicates p ≤ 0.05.

	OR	95% CI	p-value
Age	1.00	0.97-1.05	0.660
Pulmonary decongestion	0.25	0.10-0.59	***0.002**
Impella 2.5/CP	0.42	0.18-0.96	***0.039**
Impella CP	1.21	0.39-3.69	0.741
MCS support length	1.01	0.83-1.31	0.702
GFR	0.99	0.97-1.01	0.238
Total fluid balance t24h	1.00	0.99-1.01	0.308
Total fluid balance t72h	1.00	1.00-1.00	0.681
Central venous pressure	1.07	0.95-1.20	0.269
Mechanical ventilation	1.37	0.36-5.19	0.641
Reduced left ventricular function	0.60	0.16-2.28	0.445
PCI	1.75	0.55-5.56	0.343

CI=confidence interval; OR=Odds ratio; GFR = Glomerular filtration rate; PCI = Percutaneous coronary intervention.