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Right Ventricular Dysfunction in Early Sepsis and Septic Shock

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CHEST 2021; 159(3):1055-1063

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e-Table 1: Outcomes by RV and LV Dysfunction Status. p-value compares 'RV Dysfunction Only' to 'RV + LV Dysfunction'.

Variable	No RV or LV Dysfunction (n=60)	RV Dysfunction Only (n=35)	LV Dysfunction Only (n=130)	RV + LV Dysfunction (n=145)	p- value
28-day Mortality; n (%)	15 (25%)	11 (31%)	15 (12%)	46 (32%)	1.00
Vent Free Days	28 (2, 28)	24 (0, 28)	28 (24.25 - 28)	26 (0, 28)	0.85
Delta SOFA	-3.5 (-6, -0.75)	-5 (-6, -1.5)	-5 (-7, -3)	-3 (-7, -1)	0.91
Cardio OFFD to day 14	11 (3, 13)	11 (7, 12)	12 (11, 13)	11 (5 ,13)	0.74
Coag. OFFD to day 14	14 (11.5, 14)	14 (10, 14)	14 (14, 14)	14 (10, 14)	0.49
Hepatic OFFD to day 14	14 (10, 14)	14 (12, 14)	14 (13, 14)	14 (11, 14)	0.73
Renal OFFD to day 14	13.5 (11, 14)	13 (6.5, 14)	14 (13, 14)	13 (6, 14)	0.86

e-Table 2: Outcomes by RV and LV Dysfunction (Systolic Only) Status. This p-value compares 'RV Dysfunction Only' to 'RV + LV Dysfunction'.

Variable	No RV or LV Dysfunction	RV Dysfunction	LV Dysfunction	RV + LV Dysfunction	p- value
	(n=84)	Only	Only (n=104)	(n=124)	
		(n=55)			
28-day Mortality; n (%)	16 (19%)	18 (33%)	14 (13%)	38 (31%)	0.92
Vent Free Days	28 (18, 28)	26 (0, 28)	28 (22.75,28)	26 (0, 28)	0.77
Delta SOFA	-3 (-6, -1)	-5 (-6, -2)	-5.5 (-8, -3)	-3 (-7, -0.75)	0.41
Cardio OFFD to day 14	12 (7.75, 13)	11 (7, 12.5)	12 (10, 13)	11 (5.75, 13)	0.80
Coag. OFFD to day 14	14 (13, 14)	14 (11, 14)	14 (13, 14)	14 (10, 14)	0.26
Hepatic OFFD to day 14	14 (11, 14)	14 (12, 14)	14 (13, 14)	14 (11, 14)	0.59

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Comparison	Correlation	p-value	
	(95% Confidence Interval)		
RV strain vs. TAPSE	-0.40 (-0.51, -0.27)	<0.001	
RV strain vs. FAC	-0.24 (-0.37, -0.11)	<0.001	

e-Table 4: Logistic regression for 28-day mortality with RV strain and clinical covariates (N=220)

Variable	Odds Ratio	95% Confidence Interval	p-value
RV Strain	1.01	(0.96, 1.06)	0.67
APACHE II	1.13	(1.08, 1.18)	<0.001
Ventilated during echo	0.24	(0.09, 0.62)	0.005
NEE Dose (per 0.01 mcg/kg/min increase)	1.00	(0.98, 1.02)	0.82
Fluid 6 hours prior to echo	1.00	(0.99, 1.00)	0.92

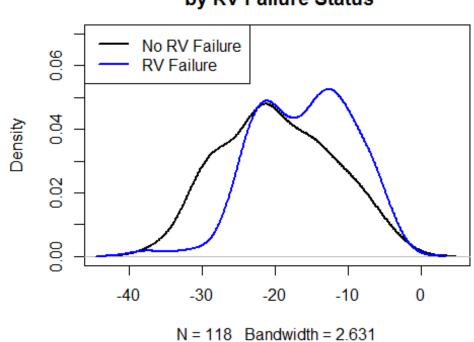
e-Table 5: Logistic regression for 28-day mortality with RV and LV dysfunction, using alternate definition of RV dysfunction as RV free wall strain > -20% and clinical covariates

Variable	Odds Ratio	95% Confidence Interval	p-value
RV Dysfunction	2.05	(0.85, 4.99)	0.11
LV Systolic Dysfunction	0.47	(0.19, 1.15)	0.10
LV Diastolic Dysfunction	1.48	(0.62, 3.55)	0.38
APACHE II	1.13	(1.07, 1.19)	<0.001
Ventilated during echo	0.22	(0.06, 0.79)	0.02
PaO2/FiO2 ratio	1.00	(1.00, 1.00)	0.65
NEE Dose (per 0.01 mcg/kg/min increase)	3.34	(0.42, 26.6)	0.26
Fluid 6 hours prior to echo, mL	1.00	(1.00, 1.00)	0.84

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e-Figure 1. Distribution of RV Free wall strain by RV dysfunction status. The overlapping distributions suggest that RV strain can be abnormal in patients with normal TAPSE and FAC, and vice versa. The bimodal distribution in the RV failure group is of interest as a proportion of patients with normal RV strain (and presumably normal contractility) had either abnormal TAPSE or FAC, measurements which are more susceptible to the effects of preload and afterload.



Distribution of RV Free-wall Strain by RV Failure Status