

Supplement 4 : A Comparative Analysis of Study Cohort

Charateristics	All (N=1172)	Groups	Alive_at Discharge (n=746)	In Hospital Death (n=426)	p value	smd
Severity Scores						
SOFA Score (median [IQR])	6.00 [4.00, 9.00]		5.00 [3.00, 7.00]	8.50 [6.00, 11.00]	<0.001	0.98
Q Total SOFA Score (median [IQR])	2.00 [1.00, 3.00]		2.00 [1.00, 2.00]	2.00 [2.00, 3.00]	<0.001	0.811
SIRS (median [IQR])	3.00 [2.00, 4.00]		3.00 [2.00, 4.00]	3.00 [3.00, 4.00]	0.007	0.203
APACHE II Score (median [IQR])	20.00 [14.00, 26.00]		17.00 [12.00, 24.00]	23.00 [19.00, 31.00]	<0.001	0.713
Demographics						
Age (median [IQR])	65.00 [52.75, 74.00]		65.00 [53.00, 74.00]	64.50 [52.25, 74.00]	0.866	0.061
Gender (%)	719(61.3) 453(38.7)	Male Female	434 (58.2) 312 (41.8)	285 (66.9) 141 (33.1)	0.003	0.181
BMI (median [IQR])	20.59 [17.81, 25.00]		19.95 [17.30, 23.30]	23.44 [19.12, 30.36]	<0.001	0.785
Infection Primary Reason for Hospital Admission (%)	778(66.4)		532 (71.3)	246 (57.7)	<0.001	0.286
Infection Primary Reason for ICU Admission (%)	820(70.0)		555 (74.4)	265 (62.2)	<0.001	0.264
ICU transferred From (%)	58(4.9)	ICU transferred From another hospital (%)	38 (5.1)	20 (4.7)	0.889	0.018
	844(72)	ICU Transferred from Emergency (%)	565 (75.7)	279 (65.5)	<0.001	0.226
	31(2.6)	ICU Transferred From OT (%)	20 (2.7)	11 (2.6)	1	0.006
	166(14.2)	ICU Transferred From WARD (%)	81 (10.9)	85 (20.0)	<0.001	0.254
Suspected origin of Infection (%)	960(81.9)	Community acquired Infection(%)	637 (85.4)	323 (75.8)	<0.001	0.244
	165(14.1)	Hospital Acquired infection (%)	89 (11.9)	76 (17.8)	0.007	0.167
	47(4)	ICU Acquired Infection(%)	20 (2.7)	27 (6.3)	0.003	0.177
Location Sepsis Diagnosis (%)	933(79.6)	Location Sepsis diagnosis ICU (%)	595 (79.8)	338 (79.3)	0.88	0.01
	139(11.9)	Location Sepsis diagnosis other (%)	95 (12.7)	44 (10.3)	0.26	0.075

	100(8.5)	Location Sepsis Diagnosis Ward (%)	56 (7.5)	44 (10.3)	0.103	0.099
Charlson comorbidity index (median [IQR])	3.00 [2.00, 5.00]		3.00 [2.00, 5.00]	4.00 [2.00, 5.00]	0.004	0.197
Clinical Details (On the day of sepsis diagnosis)						
Systolic BP lesser than 90mm Hg on admission (%)	742(63.3)		367 (49.2)	375 (88.0)	<0.001	0.921
Septic Shock as per Sepsis 3 criteria(%)	500(42.6)		246 (33.0)	254 (59.6)	<0.001	0.555
Clinical Feature hypoperfusion (%)	338(28.8)		166 (22.3)	172 (40.4)	<0.001	0.398
Risk factor for drug resistant infection infection (%)	371(31.7)		248 (33.2)	123 (28.9)	0.133	0.095
Organ Support (%)	64(5.5)	Dialysis (%)	42 (5.6)	22 (5.2)	0.79	0.021
	394(33.6)	Ventilation (%)	165 (22.1)	229 (53.8)	<0.001	0.69
	71(6.1)	ventilation and dialysis (%)	29 (3.9)	42 (9.9)	<0.001	0.238
Lab Paramaters (On the day of Sepsis Diagnosis)						
PaO2 Value (median [IQR]) (mmHg)	212.65 [110.00, 320.25]		263.95 [167.51, 350.00]	130.85 [70.25, 231.48]	<0.001	0.793
PaCO2 Value (median [IQR]) (mmHg)	35.00 [29.00, 43.00]		34.00 [29.00, 41.00]	36.00 [29.33, 45.37]	0.001	0.251
Arterial pH (median [IQR])	7.37 [7.26, 7.43]		7.39 [7.30, 7.45]	7.30 [7.20, 7.40]	<0.001	0.468
Serum HCO3 (mmol/L) (median [IQR])	20.50 [16.00, 24.20]		21.00 [17.10, 24.40]	19.78 [15.03, 23.37]	0.003	0.152
Leukocytes Value : (median [IQR]) (mm3)	13200.00 [8100.00, 20000.00]		13332.42 [8850.00, 19175.00]	13000.00 [6800.00, 22075.50]	0.3	0.043
Platelets Value (median [IQR])(μL)	160000.00 [100000.00, 240000.00]		171374.86 [133000.00, 254000.00]	135766.13 [70000.00, 203750.00]	<0.001	0.301
Serum Potassium (median [IQR]) (mmol/L)	4.00 [3.40, 4.60]		4.00 [3.40, 4.51]	4.00 [3.50, 4.75]	0.082	0.135
Serum Sodium (median [IQR])(mmol/L)	134.80 [130.28, 138.50]		134.00 [130.30, 138.00]	135.60 [130.07, 141.00]	0.004	0.166

serum Creatinine (median [IQR]) (mg/dl)	1.60 [0.98, 2.80]		1.50 [0.95, 2.66]	1.80 [1.00, 2.93]	0.052	0.055
Serum Albumin (median [IQR]) (g/dl)	3.00 [2.50, 3.40]		3.20 [2.80, 3.52]	2.58 [2.20, 3.00]	<0.001	0.838
Blood Glucose (mg/dl) (median [IQR])	169.00 [130.00, 213.57]		180.00 [134.00, 226.18]	152.39 [126.00, 189.77]	<0.001	0.351
Initial Resuscitation						
Fluid Infused Type (%)	753(64.2)	Normal saline (%)	502 (67.3)	251 (58.9)	0.004	0.174
	34(2.9)	Ringers lactate (%)	17 (2.3)	17 (4.0)	0.104	0.098
	264(22.5)	Other Balanced (%)	145 (19.4)	119 (27.9)	0.001	0.201
Amt. of Fluid Infused in 1hr.(ml) (median [IQR])	200.00 [83.00, 500.00]		210.02 [100.00, 500.00]	181.93 [60.00, 500.00]	0.001	0.011
Amt. of Fluid Infused in 3hrs (ml) (median [IQR])	387.59 [200.00, 786.65]		430.76 [240.00, 800.00]	300.00 [150.00, 758.75]	0.001	0.02
Albumin infusion Within 3hr (%)	233(19.9)		56 (7.5)	177 (41.5)	<0.001	0.862
Lactate Level 1hr value (mmol/l) (median [IQR])	2.30 [1.40, 3.90]		2.10 [1.30, 3.35]	2.76 [1.60, 4.72]	<0.001	0.394
Blood Culture Sent (%)	985(84)		608 (81.5)	377 (88.5)	0.002	0.197
Vasopressor (%)	675(57.6)		303 (40.6)	372 (87.3)	<0.001	1.114
Hemodynamic monitoring (%)	864(73.7)		480 (64.3)	384 (90.1)	<0.001	0.647
Source Control (%)	379(32.3)		306 (41.0)	73 (17.1)	<0.001	0.545
Antibiotic						

Empirical Antibiotic given (%)	1158(98.8)		732 (98.1)	426 (100.0)	0.003	0.196
Correct empiric choice (%)	889(75.9)		583 (78.2)	306 (71.8)	0.016	0.146
Beta lactam given as extented infusion (%)	773(66)		458 (61.4)	315 (73.9)	<0.001	0.271
Loading dose of antibiotic (%)	1009(86.1)		656 (87.9)	353 (82.9)	0.018	0.144
Descalation of antibiotic (%)	416(35.5)		266 (35.7)	150 (35.2)	0.899	0.009
TDM Performed (%)	176(15)		127 (17.0)	49 (11.5)	0.011	0.158
Renal adjustment (%)	677(57.8)		419 (56.2)	258 (60.6)	0.157	0.089
Empirical antifungal (%)	262(22.4)		104 (13.9)	158 (37.1)	<0.001	0.551
Microbiology						
Culture Site		Culture Site -Abdomen (%)	5 (1.4)	7 (3.0)	0.236	0.108
		Culture Site -blood (%)	137 (39.3)	104 (45.0)	0.17	0.117
		Culture Site -others (%)	9 (2.6)	4 (1.7)	0.578	0.058
		Culture Site -Respiratory (%)	69 (19.8)	70 (30.3)	0.004	0.245
		Culture Site -Urine (%)	111 (31.8)	34 (14.7)	<0.001	0.413
		Culture Site -wound (%)	18 (5.2)	12 (5.2)	1	0.002
Sensitivity (%)	327(27)	Carba Resistant Organism (%)	194 (26.0)	133 (31.2)	0.058	0.116
	240(20)	Carba Sensitive Organism (%)	149 (20.0)	91 (21.4)	0.599	0.034
	0.7(9)	MRSA (%)	5 (0.7)	4 (0.9)	0.731	0.03
Is sepsis attributed to infection with the organism cultured (%)	697(59.5)		450 (60.3)	247 (58.0)	0.458	0.048
Any Other Culture Sent (%)	882(75.3)		547 (73.3)	335 (78.6)	0.049	0.125
Multiplex PCR (%)	91(7.8)		57 (7.6)	34 (8.0)	0.822	0.013
Resistance gene detected (%)	25(2.1)		12 (21.1)	13 (38.2)	0.092	0.383
Adjunctive Therapy for Sepsis						
Corticosteroids (%)	474(40.4)		210 (28.2)	264 (62.0)	<0.001	0.723

Vitamin C (%)	46(3.9)		30 (4.0)	16 (3.8)	0.877	0.014
Thiamine (%)	382(32.6)		317 (42.5)	65 (15.3)	<0.001	0.63
Extracorporeal Therapy (%)	105(9)		26 (3.5)	79 (18.5)	<0.001	0.496
Other Immunomodulator used (%)	7(0.6)		4 (0.5)	3 (0.7)	0.709	0.021
Bicarbonate Therapy (%)	260(22.2)		110 (14.7)	150 (35.2)	<0.001	0.487
Course in Hospital						
NIV (%)	286(24.4)		182 (24.4)	104 (24.4)	1	<0.001
HFNO (%)	275(23.5)		183 (24.5)	92 (21.6)	0.282	0.07
Invasive ventilation (%)	563(48)		206 (27.6)	357 (83.8)	<0.001	1.372
Successful Extubated (%)	158(13.5)		126 (61.2)	32 (9.0)	<0.001	1.307
Reintubation (%)	41(3.5)		18 (9.6)	23 (6.7)	0.24	0.104
Prone (%)	39(3.3)		16 (8.6)	23 (6.7)	0.486	0.072
Recruitment maneuver(%)	67(5.7)		18 (9.9)	49 (14.6)	0.169	0.142
Renal Support (%)	357(30.5)		156 (20.9)	201 (47.2)	<0.001	0.577
Encephalopathy (%)	369(31.5)		135 (18.1)	234 (54.9)	<0.001	0.828
coagulopathy (%)	169(14.4)		87 (11.7)	82 (19.2)	0.001	0.211
Liver dysfunction (%)	173(14.8)		93 (12.5)	80 (18.8)	0.005	0.175
Nosocomial infection (%)	385(32.8)		79 (10.6)	306 (71.8)	<0.001	1.589
Nutrition started early (%)	980(83.6)		645 (86.5)	335 (78.6)	0.001	0.207
Blood transfusion (%)	321(27.4)		162 (21.7)	159 (37.3)	<0.001	0.347
Platelet transfusion (%)	102(8.7)		39 (5.2)	63 (14.8)	<0.001	0.323
FFP transfusion (%)	114(9.7)		34 (4.6)	80 (18.8)	<0.001	0.454
DVT Prophylaxis (%)	711(60.7)		455 (61.0)	256 (60.1)	0.804	0.018
Stress Ulcer Prophylaxis (%)	1108(94.5)		718 (96.2)	390 (91.5)	0.001	0.197

Continuous Infusion sedation (%)	308(26.3)		114 (15.3)	194 (45.5)	<0.001	0.696
Sedation scale used (%)	313(26.7)		121 (16.2)	192 (45.1)	<0.001	0.659
Continuous analgesia (%)	112(9.6)		56 (7.5)	56 (13.1)	0.002	0.186
Pain scale monitored (%)	321(27.4)		160 (21.4)	161 (37.8)	<0.001	0.364
Delirium assessed (%)	183(15.6)		128 (17.2)	55 (12.9)	0.055	0.119
Neuromuscular blocker infusion (%)	97(8.3)		36 (4.8)	61 (14.3)	<0.001	0.327
TOF monitored (%)	17(1.5)		4 (0.5)	13 (3.1)	0.001	0.19
ECMO used (%)	1(0.1)		1 (0.1)	0 (0.0)	1	0.052
Clinical Outcome						
Clinical improvement (%)	628(53.6)		610 (81.8)	18 (4.2)	<0.001	2.519
ICU discharge status Discharge Status (%)	758(64.7)	Alive	746 (100.0)	12 (2.8)	<0.001	8.307
		Dead	0 (0.0)	414 (97.2)		
Hospital Length of stay (median [IQR])	9.00 [5.00, 14.00]		10.00 [6.00, 14.00]	8.00 [4.00, 15.00]	<0.001	0.062
ICU length of stay (median [IQR])	6.00 [3.00, 10.00]		5.50 [4.00, 9.00]	6.00 [3.00, 13.00]	0.286	0.211
Was Death attributable to sepsis (%)	309(26.4)		0 (0.0)	309 (72.5)	<0.001	2.298
Unanticipated Cardiac arrest (%)	172(14.7)		10 (1.3)	162 (38.0)	<0.001	1.04
SOFA score: Sequential (or Sepsis-related) Organ Failure Assessment score						
qSOFA score: quick Sequential (or Sepsis-related) Organ Failure Assessment score						
SIRS: Systemic Inflammatory Response Syndrome						
APACHE score: Acute Physiology And Chronic Health Evaluation score						
BMI: Body Mass Index						
NIV: Non-Invasive Ventilation						
HFNO: High-Flow Nasal Oxygen						
DVT: Deep Vein Thrombosis						
FFP: Fresh Frozen Plasma						
TOF: Train-Of-Four (used in neuromuscular monitoring)						
TDM: Therapeutic Drug Monitoring						