

Parameters of survivors and non-survivors on admission to the intensive care unit (Table 2).

Non-survivors also had low PO₂/FiO₂ ratios, low pH and albumin levels, but higher admission heart rates

and high respiratory rate, and higher CPR and procalcitonin level, lactate level than surviving patients.

Table 2. Vital signs and laboratory

Parameter	Survivor (n=79)	Non-survivor (n=21)	P-value
Systolic blood pressure (mm Hg)	128.0±23.4	120.5±24.3	0.151
Diastolic blood pressure (mm Hg)	67.8±15.2	60.3±12.6	0.095
Respiratory rate (/min)	23.7±4.9	27.3±4.8	0.162
Heart rate (/min)	97.4±22.6	115.7±25.1	0.027
Creatinine (mg/dl)	1.35±1.20	1.88±1.77	0.106
Albumin (g/dl)	3.4±0.6	2.7±0.5	<0.001
White blood cell (×10 ³ /L)	14.4±9.8	15.4±8.8	0.679
Hemoglobin (g/dl)	13.2±9.4	11.3±1.7	0.076
C-reactive protein (mg/dl)	6.2 (1.7–11.1)	10.6 (5.7–17.1)	0.033
pH	7.263±0.069	7.246±0.123	0.358
PCO ₂ (mm Hg)	67.6±17.7	62.3±13.6	0.259
HCO ₃ (mEq/L)	26.0±5.9	23.8±7.2	0.208
PaO ₂ /FiO ₂ (mm Hg)	223.3±93.0	143.3±91.3	0.015
Lactate (mmol/L)	1.3 (1.0–2.1)	1.9 (1.1–2.2)	0.198
Procalcitonin (PCT)(mg/dL), mean± SD	0.93±0.97	3± 6	.004

Discussion

Total study population was 53. Among them 12 were deceased. ICU mortality rates were 22.64% and among total ICU deaths (n=339 total ICU death during this period) was 3.53%. Study was conducted in ICU from January 2024 to December 2025 and it is a retrospect observational study.

Male patients were older age 74.9±8.9 and smoking history had higher mortality rate. Predominant male and older age are related to higher mortality. BMI was low among the non-survivor, that was 23±2 and p value, .005. Underweight participants had a significantly higher risk of death (HR, 1.88; 95% CI, 1.62–2.20; P < 0.0001).¹⁷

Exacerbations in previous year more than twice among the non-survivor was 5 (41.66%). Similar result COPD increases the all-cause mortality risk by almost 60%. Highest mortality risk was found in patients with multiple exacerbations or at least one severe exacerbation.¹⁸

Long-term O₂ therapy & home NIV use was higher in

survival group as explanation that their exacerbations were promptly addressed. COPD patients on LTOT were somewhat lower in our study.¹⁹

Significantly higher rates of cardiovascular comorbidities and diabetes mellitus compared to published data. Mortality is reportedly increased in patients with cardiovascular co-morbidities^{20,21,24} and diabetes mellitus.^{21,22,23,24} The prevalence of coronary artery disease (58.33%) and arrhythmia. 41.66%) were demonstrated more frequent in non-survivors compared to survivors in this study.

Higher APACHE II scores non-survivors than survivors, as also in our cases.^{3,23,26,28} APACHE II scores have also been reported as an independent predictor of ICU, in-hospital mortality.^{3,12,23,28}

In this study showed that admission GCS lower in non-survival group and length of ICU stay was longer 14 (4–26) days and p value 0.006. Pre-ICU intubation, the severe physiological derangement of the patients upon ICU admission and the high comorbidity burden could justify the comparatively longer LOS in ICU